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BEST REMAINING NATURAL COMMUNITY AND
RARE SPECIES SITES OF NEW JERSEY'S
CAPE MAY PENINSULA AND VICINITY

FINAL REPORT: TASK 3



NEOTROPICAL MIGRATORY SONGBIRD REGIONAL
COASTAL CORRIDOR STUDY

Prepared by:

New Jersey Natural Heritage Program
Department of Environmental Protection and Energy
Division of Parks and Forestry
Office of Natural Lands Management

June 1992

A report of the Virginia Council on the Environment to the
National Oceanic and Atmospheric Administration pursuant to
NOAA Award No. NA90AA-H-CZ839

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NOAA GRANT #NA90AA-H-CZ839

Submitted to:

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INTRODUCTION

This appendix on the best remaining natural community and rare species sites of the Cape May peninsula and vicinity is provided as part of "A Regional Study Of The Coastal Zone Habitat of Critical Importance As Concentration Areas For Neotropical Avian Migrants", pursuant to NOAA Grant # NA90AA-H-CZ839. Under task 3 of the proposal, the best remaining "upland" (non-salt marsh) communities were to be identified, described and the sites containing them mapped, following a proven, standardized approach developed by State Natural Heritage Programs for intensive county-level inventories. Rare species sites were similarly identified, described and mapped.

The area covered in this survey of sites included all of New Jersey's Cape May peninsula, and the coastal zone areas of Cape May County beyond the peninsula. Areas of Cape May County beyond the coastal zone within the State Pinelands Area were generally excluded from the survey. Areas of open salt marsh were also generally excluded from the survey, except for salt marsh sites with important forested areas fringing them.

METHODS

During this study, field documented sites from the New Jersey Natural Heritage Database were identified which provide habitat for one or more rare, threatened, or endangered species or natural communities. All were updated with a preserve design analysis and community survey using 1:24,000 scale enlargements of 1984-85 high altitude color-infrared aerial photography (available from ASCS-USDA) and USGS topographic maps, and most were field checked to confirm the presence, distribution and condition of natural communities. Several new sites were also identified using the same methods. Most standard sites were delineated using a primary boundary (single hatched line) and a secondary boundary (double hatched line), and a justification was provided for each. Macrosites (areas 3,400-64,000 acres in area) were delineated with secondary bounds only and often had standard sites (less than 3,400 acres) contained within.

All standard sites and macrosites were ranked according to their significance for biological diversity. This information will be extremely useful to the municipalities of Cape May County as they proactively work, perhaps with limited resources, to preserve the most significant components of their natural diversity.

Biodiversity Significance is a rating that describes the significance of the site in terms of the diversity, rareness, and quality of the rare species and natural community occurrences. The following ranks are used:

B1 - Outstanding significance, generally of a "last of the least" type, such as only known occurrence of any element (species or natural community), the best or an excellent (A-ranked) occurrence of a G1 element¹, or a concentration (4+) of high-ranked (A or B ranked) occurrences of G1 or G2 elements. Site should be viable and defensible for elements and ecological processes contained.

B2 - Very high significance, such as the most outstanding occurrence of any community element (regardless of its element rank). Also includes areas containing any other (B, C, D ranked) occurrence of a G1 element, a good (A or B ranked) occurrence of a G2 element, an excellent (A ranked) occurrence of a G3 element, or a concentration (4+) of B ranked G3 or C ranked G2 elements.

B3 - High significance, such as any other (C or D ranked) occurrence of a G2 element, a B ranked occurrence of a G3 element, an A ranked occurrence of any community, or a concentration (4+) of A or B ranked occurrences of (G4 or G5) S1 elements.

B4 - Moderate significance, such as a C-ranked occurrence of a G3 element, a B ranked occurrence of any community, an A or B ranked or only state (but at least C ranked) occurrence of a (G4 or G5) S1 element, an A ranked occurrence of an S2 element, or a concentration (4+) of good (B ranked) S2 or excellent (A ranked) S3 elements.

B5 - Of general biodiversity interest or open space.

¹(The rarity of plant, animal and community "elements" are ranked at a global and state level using codes as G1, G2, G3, S1, S2, etc. The attached "Explanations Of Codes Used In Natural Heritage Reports" defines these global and state element ranks on pages 4-6.)

RESULTS AND DISCUSSION

The 33 standard sites and macrosites of the Cape May peninsula area which are described in this report are ecologically significant. All of the standard sites and macrosites support biologically significant features, often with concentrations of rare plant and animal species, and rare or exemplary natural plant communities. The Cape May Corridor Macrosite is a greenbelt which runs the length of Cape May peninsula, linking the 18 standard sites it contains with the remaining contiguous forests of the peninsula. Great Cedar Swamp and Dennis Creek Marsh Macrosites link the contiguous forests of the peninsula with those of the Pinelands and Delaware Bayshore to the north and northwest.

The Cape May Corridor Macrosite is very significant for a number of reasons. First, its large areas of forest interior habitat, dominated by a wetland/mesic upland complex and influenced by a southerly coastal climate, support many rare plant and animal species and species of southern affinity at or near the northern limit of their range. Second, the continuity of forest cover provides a corridor for the long and short term migration of species through the Cape May peninsula and adjacent Delaware Bayshore and Pinelands forest areas. This migration probably includes neotropical passerines, raptors and numerous other migratory bird species making essential stopovers for resting and feeding, as well as numerous indigenous species making gradual adjustments to their range, including rare and uncommon species. Such a corridor is also essential to maintain the long term gene flow within species on the peninsula and the other portions of their range, in order to prevent the deleterious loss of genetic variability often associated with isolation and inbreeding in small subpopulations created by ecosystem fragmentation. Finally, the forest areas function as a critical watershed to the vulnerable aquifers of Cape May peninsula, which are presently threatened by the loss of recharge zones to overdevelopment, excessive well water removal, and salt water intrusion.

The Avalon-Stone Harbor Marsh Macrosite, Delaware Bayshore Macrosite, and the several barrier island standard sites all lie on the Atlantic flyway and are important stopover areas for many migrating bird species, as well as being nesting areas for several rare shore bird species.

The Cape May National Wildlife Refuge is in the process of being established by the US Fish and Wildlife Service. Upon its completion, the refuge will form the 15,000 plus acre core of the Cape May Corridor-Great Cedar Swamp greenbelt. To the greatest extent possible, unprotected sites described in this report should be given high priority for inclusion to the national wildlife refuge acquisition area. The core of the greenbelt will also be composed of other public and private preserves, including Timber and Beaver Swamp State Wildlife Management Area, Frye Preserve (Natural Lands Trust), Fishing Creek County Park, Higbee Beach State Wildlife Management Area and The Nature Conservancy/New Jersey Audubon Society owned Bennett Bogs and Cape May Migratory Bird Refuge.

Because resources to purchase land are limited, not all portions of the sites can be protected in a timely manner. Alternative conservation techniques must be implemented if these natural resources are to be protected.

Regulation of land use through municipal zoning can be one of the most effective tools to direct high intensity land use away from sensitive areas. The most sensitive areas, such as wetlands and rare species or community sites identified in this report, might be zoned for conservation and non-impacting uses only. Undeveloped, ecologically important areas which are less sensitive, such as uplands within Cape May Corridor Macrosite but outside rare species/community sites, might be zoned for very low density residential development. "Forest Area" zones in Pinelands municipalities to the north provide examples of this type of very low density zoning, typically with residential densities of one unit per 15 to 25 acres. Somewhat higher density zoning may be appropriate in the few rurally developed portions of the macrosites, perhaps at densities of one unit per 5 to 10 acres. The sale of development credits from areas zoned for conservation or low densities, to allow higher development densities in growth areas outside the standard sites and macrosites, provides an effective means of directing development away from the more sensitive areas and giving land owners in these conservation and low density zones a legal use of their property other than development.

EXPLANATIONS OF CODES USED IN NATURAL HERITAGE REPORTS

FEDERAL STATUS CODES

The following U.S. Fish and Wildlife Service categories and their definitions of endangered and threatened plants and animals have been modified from the U.S. Fish and Wildlife Service (F.R. Vol. 50 No. 188; Vol. 55, No. 35; F.R. 50 CFR 17.11 and 17.12). Federal Status codes reported for species follow the most recent listing.

- LE Taxa formally listed as endangered.
- LT Taxa formally listed as threatened.
- PE Taxa already proposed to be formally listed as endangered.
- PT Taxa already proposed to be formally listed as threatened.
- C1 Taxa for which the Service currently has on file substantial information on biological vulnerability and threat(s) to support the appropriateness of proposing to list them as endangered or threatened species.
- C1* Taxa which may be possibly extinct (although persuasive documentation of extinction has not been made--compare to 3A status).
- C2 Taxa for which information now in possession of the Service indicates that proposing to list them as endangered or threatened species is possibly appropriate, but for which substantial data on biological vulnerability and threat(s) are not currently known or on file to support the immediate preparation of rules.
- C3 Taxa that are no longer being considered for listing as threatened or endangered species. Such taxa are further coded to indicate three subcategories, depending on the reason(s) for removal from consideration.
- 3A Taxa for which the Service has persuasive evidence of extinction.
- 3B Names that, on the basis of current taxonomic understanding, do not represent taxa meeting the Act's definition of "species".
- 3C Taxa that have proven to be more abundant or widespread than was previously believed

and/or those that are not subject to any identifiable threat.

S/A Similarity of appearance species.

STATE STATUS CODES

Two animal lists provide state status codes after the Endangered and Nongame Species Conservation Act of 1973 (NSSA 23:2A-13 et. seq.): the list of endangered species (N.J.A.C. 7:25-4.13) and the list defining status of indigenous, nongame wildlife species of New Jersey (N.J.A.C. 7:25-4.17(a)). The status of animal species is determined by the Nongame and Endangered Species Program (ENSP). The state status codes and definitions provided reflect the most recent lists that were revised in the New Jersey Register, Monday, June 3, 1991.

- D Declining species-a species which has exhibited a continued decline in population numbers over the years.
- E Endangered species-an endangered species is one whose prospects for survival within the state are in immediate danger due to one or many factors - a loss of habitat, over exploitation, predation, competition, disease. An endangered species requires immediate assistance or extinction will probably follow.
- EX Extirpated species-a species that formerly occurred in New Jersey, but is not now known to exist within the state.
- I Introduced species-a species not native to New Jersey that could not have established itself here without the assistance of man.
- INC Increasing species-a species whose population has exhibited a significant increase, beyond the normal range of its life cycle, over a long term period.
- T Threatened species-a species that may become endangered if conditions surrounding the species begin to or continue to deteriorate.
- P Peripheral species-a species whose occurrence in New Jersey is at the extreme edge of its present natural range.

- S Stable species-a species whose population is not undergoing any long-term increase/decrease within its natural cycle.
- U Undetermined species-a species about which there is not enough information available to determine the status.

Status for animals separated by a slash(/) indicate a dual status. First status refers to the state breeding population, and the second status refers to the migratory or winter population.

Plant taxa listed as endangered are from New Jersey's official Endangered Plant Species List N.J.S.A. 131B-15.151 et seq.

- E Native New Jersey plant species whose survival in the State or nation is in jeopardy.

REGIONAL STATUS CODES FOR PLANTS

- LP Indicates taxa listed by the Pinelands Commission as endangered or threatened within their legal jurisdiction. Not all species currently tracked by the Pinelands Commission are tracked by the Natural Heritage Program. A complete list of endangered and threatened Pineland species is included in the New Jersey Pinelands Comprehensive Management Plan.

EXPLANATION OF GLOBAL AND STATE ELEMENT RANKS

The Nature Conservancy has developed a ranking system for use in identifying elements (rare species and natural communities) of natural diversity most endangered with extinction. Each element is ranked according to its global, national, and state (or subnational in other countries) rarity. These ranks are used to prioritize conservation work so that the most endangered elements receive attention first. Definitions for element ranks are after The Nature Conservancy (1982: Chapter 4, 4.1-1 through 4.4.1.3-3).

GLOBAL ELEMENT RANKS

- G1** Critically imperiled globally because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres) or because of some factor(s) making it especially vulnerable to extinction.
- G2** Imperiled globally because of rarity (6 to 20 occurrences or few remaining individuals or acres) or because of some factor(s) making it very vulnerable to extinction throughout its range.
- G3** Either very rare and local throughout its range or found locally (even abundantly at some of its locations) in a restricted range (e.g., a single western state, a physiographic region in the East) or because of other factors making it vulnerable to extinction throughout its range; with the number of occurrences in the range of 21 to 100.
- G4** Apparently secure globally; although it may be quite rare in parts of its range, especially at the periphery.
- G5** Demonstrably secure globally; although it may be quite rare in parts of its range, especially at the periphery.
- GH** Of historical occurrence throughout its range i.e., formerly part of the established biota, with the expectation that it may be rediscovered.
- GU** Possibly in peril range-wide but status uncertain; more information needed.
- GX** Believed to be extinct throughout range (e.g., passenger pigeon) with virtually no likelihood that it will be rediscovered.
- G?** Species has not yet been ranked.

STATE ELEMENT RANKS

- S1** Critically imperiled in New Jersey because of extreme rarity (5 or fewer occurrences or very few remaining individuals or acres). Elements so ranked are often restricted to very specialized conditions or habitats and/or restricted to an extremely small geographical

area of the state. Also included are elements which were formerly more abundant, but because of habitat destruction or some other critical factor of its biology, they have been demonstrably reduced in abundance. In essence, these are elements for which, even with intensive searching, sizable additional occurrences are unlikely to be discovered.

- S2 Imperiled in New Jersey because of rarity (6 to 20 occurrences). Historically many of these elements may have been more frequent but are now known from very few extant occurrences, primarily because of habitat destruction. Diligent searching may yield additional occurrences.
- S3 Rare in state with 21 to 100 occurrences (plant species in this category have only 21 to 50 occurrences). Includes elements which are widely distributed in the state but with small populations/acreage or elements with restricted distribution, but locally abundant. Not yet imperiled in state but may soon be if current trends continue. Searching often yields additional occurrences.
- S4 Apparently secure in state, with many occurrences.
- S5 Demonstrably secure in state and essentially ineradicable under present conditions.
- SA Accidental in state, including species (usually birds or butterflies) recorded once or twice or only at very great intervals, hundreds or even thousands of miles outside their usual range; a few of these species may even have bred on the one or two occasions they were recorded; examples include european strays or western birds on the East Coast and visa-versa.
- SE Elements that are clearly exotic in New Jersey including those taxa not native to North America (introduced taxa) or taxa deliberately or accidentally introduced into the State from other parts of North America (adventive taxa). Taxa ranked SE are not a conservation priority (viable introduced occurrences of G1 or G2 elements may be exceptions).
- SH Elements of historical occurrence in New Jersey. Despite some searching of historical occurrences and/or potential habitat, no extant occurrences are known. Since not all of the historical occurrences have been field surveyed, and unsearched potential habitat remains, historically ranked taxa are considered possibly extant, and remain a conservation priority for continued field work.

- SN** Regularly occurring, usually migratory and typically nonbreeding species for which no significant or effective habitat conservation measures can be taken in the state; this category includes migratory birds, bats, sea turtles, and cetaceans which do not breed in the state but pass through twice a year or may remain in the winter (or, in a few cases, the summer); included also are certain lepidoptera which regularly migrate to a state where they reproduce, but then completely die out every year with no return migration. Species in this category are so widely and unreliably distributed during migration or in winter that no small set of sites could be set aside with the hope of significantly furthering their conservation. Other nonbreeding, high globally-ranked species (such as the bald eagle, whooping crane or some seal species) which regularly spend some portion of the year at definite localities (and therefore have a valid conservation need in the state) are not ranked SN but rather S1, S2, etc.
- SR** Elements reported from New Jersey, but without persuasive documentation which would provide a basis for either accepting or rejecting the report. In some instances documentation may exist, but as of yet, its source or location has not been determined.
- SRF** Elements erroneously reported from New Jersey, but this error persists in the literature.
- SU** Elements believed to be in peril but the degree of rarity uncertain. Also included are rare taxa of uncertain taxonomical standing. More information is needed to resolve rank.
- SX** Elements that have been determined or are presumed to be extirpated from New Jersey. All historical occurrences have been searched and a reasonable search of potential habitat has been completed. Extirpated taxa are not a current conservation priority.
- SXC** Elements presumed extirpated from New Jersey, but native populations collected from the wild exist in cultivation.
- T** Element ranks containing a "T" indicate that the infraspecific taxon is being ranked differently than the full species. For example *Stachys palustris* var. *homotricha* is ranked "G5T? SH" meaning the full species is globally secure but the global rarity of the var. *homotricha* has not been determined; in New Jersey the variety is ranked historic.
- Q** Elements containing a "Q" in the global portion of its rank indicates that the taxon is of questionable, or uncertain taxonomical standing, e.g., some authors regard it as a full species, while others treat it at the subspecific level.

- .1 Elements documented from a single location.

Note: To express uncertainty, the most likely rank is assigned and a question mark added (e.g., G2?).
A range is indicated by combining two ranks (e.g., G1G2, S1S3).

IDENTIFICATION CODES

These codes refer to whether the identification of the species or community has been checked by a reliable individual and is indicative of significant habitat.

- | | |
|-------|--|
| Y | Identification has been verified and is indicative of significant habitat. |
| BLANK | Identification has not been verified but there is no reason to believe it is not indicative of significant habitat. |
| ? | Either it has not been determined if the record is indicative of significant habitat or the identification of the species or community may be confusing or disputed. |

CAPE MAY PENINSULA PROTECTION SITES

MACROSITE and STANDARD SITE NAMES

USGS QUADRANGLES

1. Cape May Corridor Macrosite	Cape May, Rio Grande, Stone Harbor, Woodbine
2. Cape May Migratory Bird Refuge Site	Cape May
3. Cold Spring Salt Marsh Site	Cape May
4. Cold Spring Gravel Pit Site	Cape May
5. Cold Spring Woods Site	Cape May
6. Bennett Bogs Site	Cape May
7. Rio Grande Swamp Site	Rio Grande, Stone Harbor
8. Indian Trail Swamp Site	Rio Grande, Stone Harbor
9. Green Creek Site	Rio Grande
10. Pierces Pit Site	Rio Grande
11. Lizard Tail Swamp Site	Stone Harbor, Woodbine
12. Baseball Swamp Site	Stone Harbor
13. Cape May Court House Maintenance Yard	Stone Harbor
14. Mayville Site	Stone Harbor
15. Court House Pit Site	Stone Harbor
16. Bucks Avenue Site	Woodbine, Stone Harbor
17. Clermont Bog Site	Woodbine
18. Swains Station Site	Woodbine
19. WWOc Radio Station Site	Woodbine
20. Great Cedar Swamp Macrosite	Woodbine, Sea Isle City, Marmora
21. Dennis Creek Marsh Macrosite	Woodbine, Heislerville
22. Jakes Landing Cedar Swamp Site	Woodbine, Heislerville
23. Avalon-Stone Harbor Marsh Macrosite	Sea Isle City, Woodbine, Stone Harbor, Avalon
24. Crooked Creek Pit Site	Stone Harbor
25. Delaware Bayshore Macrosite	Cape May, Rio Grande, Heislerville,
Sites Not Within a Macrosite	
26. Magnolia Lake Site	Woodbine, Sea Isle City
27. Seaville Methodist Church Site	Sea Isle City
28. South Dennis Site	Woodbine
29. Two Mile Beach Site	Cape May, Wildwood
30. Stone Harbor Point Site	Stone Harbor
31. Avalon Dunes Site	Avalon
32. Corson Inlet North Site	Sea Isle City
33. Lake Lily Site	Cape May

CAPE MAY CORRIDOR MACROSITE

QUADNAME:	QUADCODE:
CAPE MAY	3807488
RIO GRANDE	3907418
STONE HARBOR	3907417
WOODBINE	3907427

LOCAL JURISDICTION:

LOWER TWP.
WEST CAPE MAY
MIDDLE TWP.
DENNIS TWP.

MACROSITE:

SITE DESCRIPTION:

The macrosite is on the outer coastal plain of Cape May peninsula, and consists of a series of nearly contiguous wetlands and adjacent mesic and dry upland forests. Some communities include Liquidambar/Acer swamp, Pine Barren hardwood swamp, Cape May lowland swamp, Pine Barren shrub swamp, coastal plain intermittent pond, mesic coastal plain mixed oak forest, dry oak-pine forest, and successional dry pine-oak forest.

BOUNDARY JUSTIFICATION:

The secondary boundary is defined by the distribution of contiguous forest and very rural landscapes along the central core of Cape May peninsula, with particular emphasis on maintaining forest continuity between standard sites within this greenbelt region. This greenbelt is significant because: 1) its large forest interior habitats support many rare animal species, and many uncommon to rare plant species of southern affinity at or near the northern limit of their range; 2) the continuity of forest cover provides a corridor for the long and short term migration of species through the Cape May peninsula and adjacent mainland forests north and west of the peninsula, and 3) the forest areas function as a critical watershed to the threatened aquifers of Cape May peninsula. Where forest or very rural landscapes occur between the central corridor and the Delaware bayshore or Atlantic saltmarsh, the bounds were extended to link with the mainland shore. This is because the remaining patches of forest along the mainland coast are likely concentration areas for migrating neotropical passerines making a dawn landfall after nighttime coastal migration. Maintaining a link between these coastal forest patches and the larger central corridor is considered important, allowing the birds to disperse inland through forested or rural corridors in the early morning hours and find less crowded feeding and resting habitat.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

(See standard sites within this macrosite for more specific information and higher priorities) Large forest interior habitats support populations of barred owl, bald eagle, red-shouldered hawk and migrating neotropical

passerines. There is a high incidence of plant species with a southern affinity, particularly in the wetlands and mesic uplands which dominate the landscape. These include southern red oak (*Quercus falcata*), willow oak (*Quercus phellos*), american holly (*Ilex opaca*) and rare species as basket oak (*Quercus michauxii*), water oak (*Quercus nigra*), pumkin ash (*Fraxinus profunda*), swamp cottonwood (*Populus heterophylla*), pond pine (*Pinus serotina*), loblolly pine (*Pinus taeda*), Walter's St. Johnswort (*Triadenum walteri*), featherfoil (*Hottonia inflata*), southern twayblade (*Listera australis*), glade spurge (*Euphorbia purpurea*), and swamp pink (*Helonias bullata*), among others. State or globally rare communities include intermittent coastal plain ponds, Cape May lowland swamp, coastal dune grass, coastal dune shrubland, coastal dune forest, and old growth forests. Cape May lowland swamp communities have an abundant cover of the state rare southerly tree species, while local variants of the hardwood swamp and mesic coastal plain mixed oak forest communities can also have low densities of the rare southerly tree species. Locally threatened communities of Cape May peninsula include atlantic white cedar swamps and dry oak-pine forest. Additional standard sites within the macrosite will likely be defined around rare species or community occurrences as more survey work is completed.

CONSERVATION INTENT:

Protection of standard sites within the macrosite is recommended by fee title acquisition. Revisions to the Cape May NWR acquisition area planned for 1992-93 by USFWS should add as many of the standard sites as funds and priorities permit. Legally binding management agreements on standard sites already in public ownership are recommended. Lands within the macrosite but not within standard sites should be protected by very low density zoning or conservation zoning at the municipale level, and perhaps overseen at the county level.

PROTECTION COMMENTS:

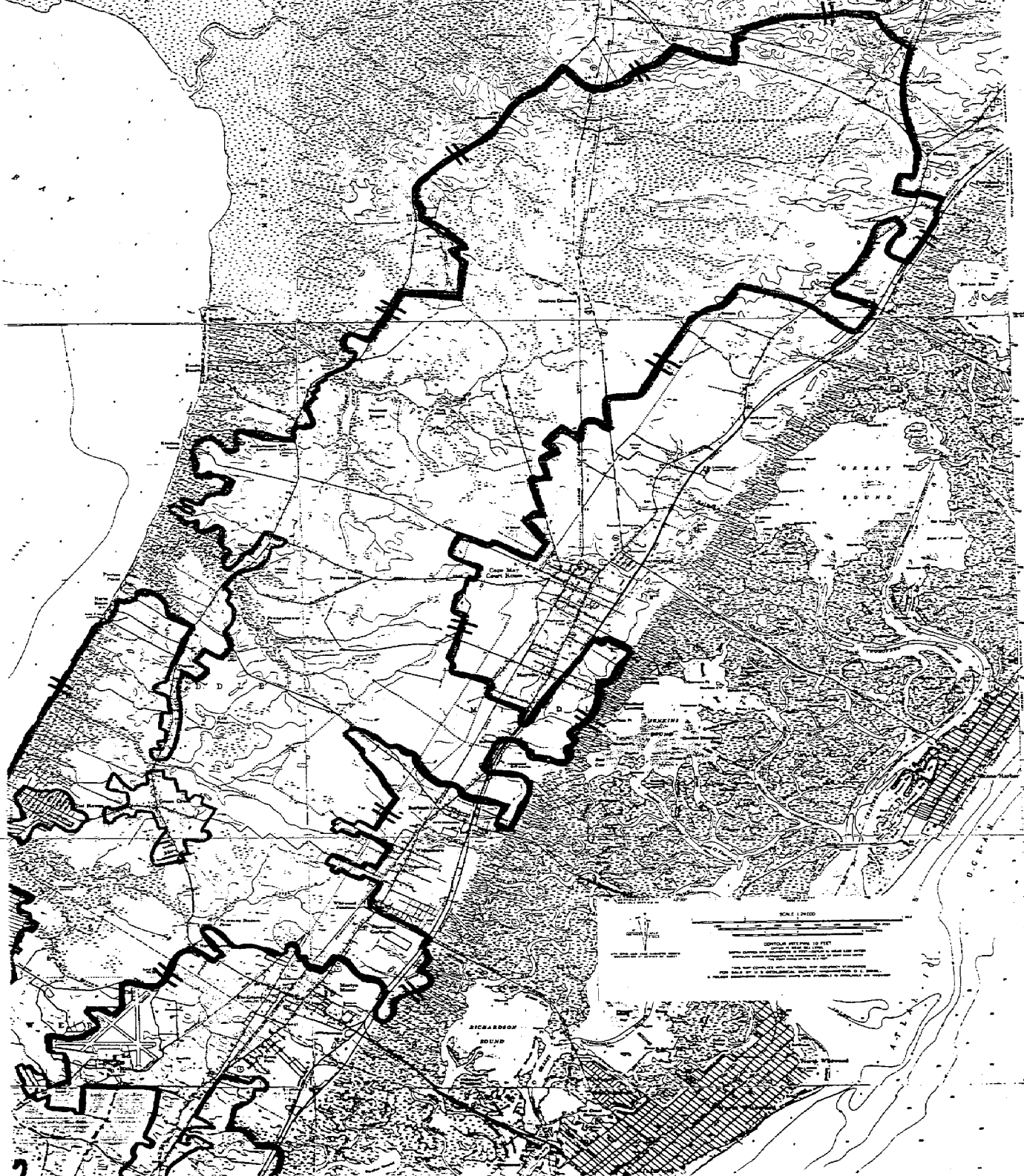
Much of the core of this macrosite falls within the proposed acquisition area of the Cape May National Wildlife Refuge - Delaware Bay Division. Many critical areas of the macrosite are privately owned and are not within the proposed refuge boundaries however.

MANAGEMENT NEEDS:

Maintaining ground water quality and preventing saltwater intrusion.

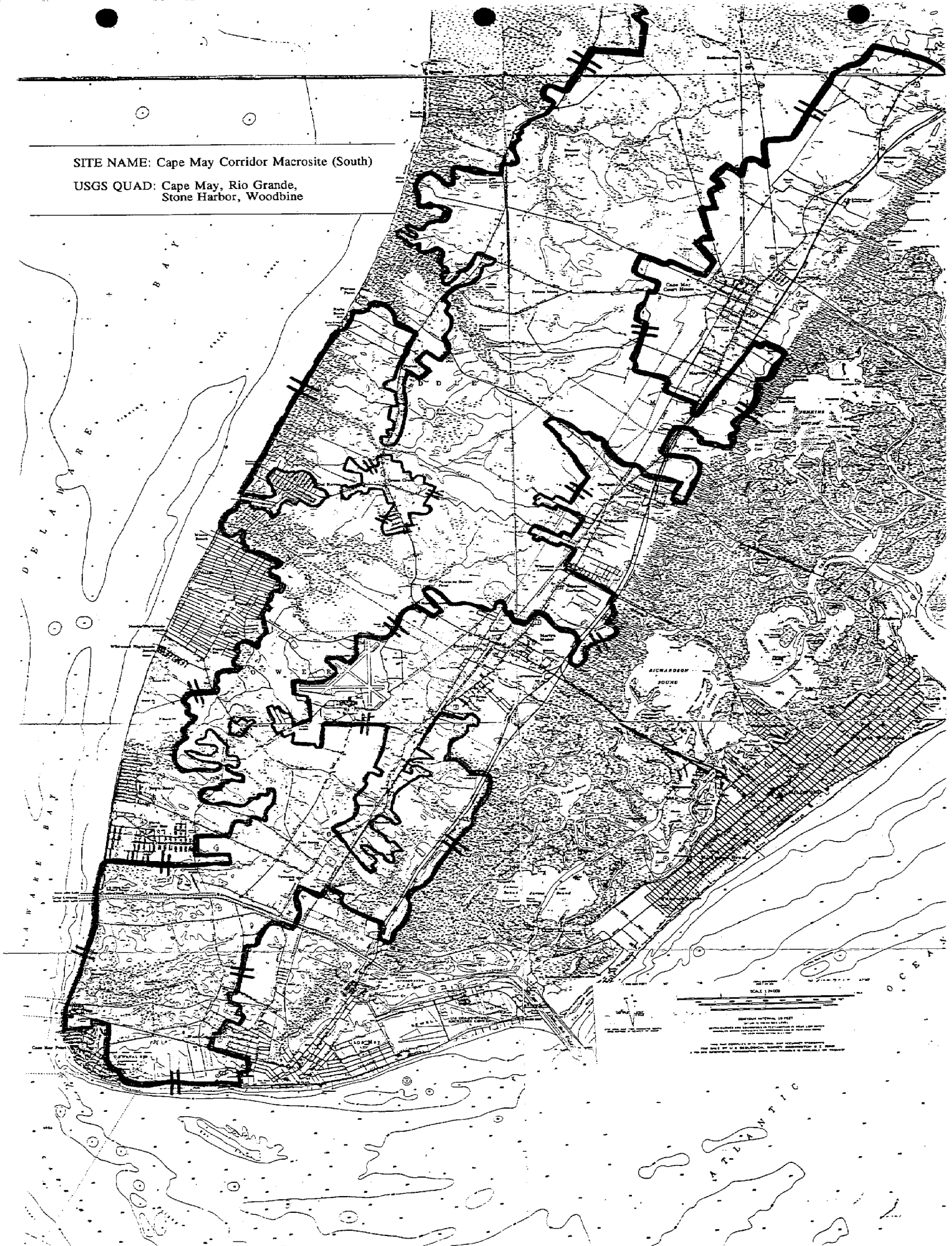
SITE NAME: Cape May Corridor Macrosite (North)

USGS QUAD: Cape May, Rio Grande,
Stone Harbor, Woodbine



SITE NAME: Cape May Corridor Macrosite (South)

USGS QUAD: Cape May, Rio Grande,
Stone Harbor, Woodbine



CAPE MAY MIGRATORY BIRD REFUGE SITE

QUADNAME:
CAPE MAY

QUADCODE:
3807488

LOCAL JURISDICTION:
LOWER TWP.
WEST CAPE MAY BORO

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain and occupies the SW tip of Cape May peninsula. There is a mosaic of upland forest and shrubland communities (including coastal dune shrubland and forest), active and abandoned agricultural fields, salt marsh-phragmites wetlands, and hardwood swamps. Narrow sandy beaches occupy the W and S margin of the site along Delaware Bay, and the Cape May canal crosses through the N end of the site.

BOUNDARY JUSTIFICATION:

Primary bounds are drawn to contain a large contiguous patch of forests and wetlands at the tip of Cape May that are used by concentrations of birds during migration or are habitat for rare species and natural communities. Secondary bounds include adjacent agricultural fields or successional areas which could be revegetated to enhance the migration corridor of the preserve and which could serve as wetland buffers.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

High concentration of migratory birds, including neotropical migrants, and numerous state imperilled plant and animal species. Also, several globally imperilled animal species. Good quality coastal dune shrubland and coastal dune woodland communities occur along the Delaware Bay, as well as small patches of coastal dune grass community. A few impacted intermittent coastal plains ponds are found in the site.

CONSERVATION INTENT:

Aquisition of available high quality tracts within the primary and secondary preserve; greatest possible protection possible for the rest.

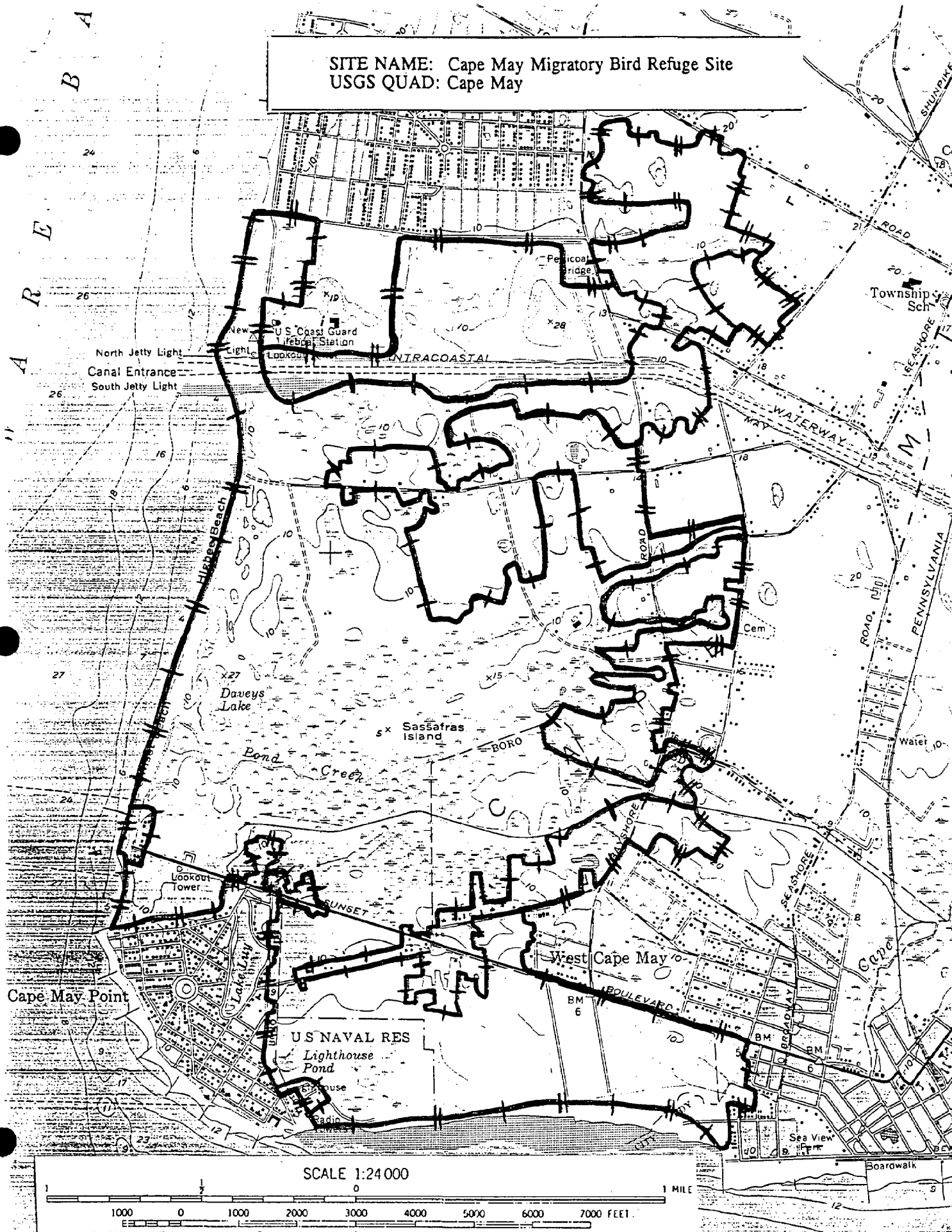
PROTECTION COMMENTS:

As of April 1992, much of the primary preserve is in public or TNC ownership (i.e. Higbee Beach WMA, Cape May Point State Park, Lower Twp. Canal Park, Cape May Migratory Bird Refuge, Hidden Valley Ranch, and New England Creek headwater (in progress?). Several critical tracts remain unprotected in the primary and secondary preserve.

MANAGEMENT NEEDS:

Very severe erosion to Higbee Beach and dunes is occurring, perhaps caused by sand depletion from the canal jetties to the north, combined with the typical winter storm action. Similar erosion is occurring on the S shore of the site, again perhaps due to jetties to the east. Management could include beach nourishment or jetty removal - both expensive, controversial solutions. Revegetation of some agricultural fields is needed to increase forest/shrub cover. Human foot traffic on dunes is contributing to the erosion problem in spots.

SITE NAME: Cape May Migratory Bird Refuge Site
USGS QUAD: Cape May



COLD SPRING SALT MARSH SITE

QUADNAME:
CAPE MAY

QUADCODE:
3807488

LOCAL JURISDICTION:
LOWER TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

This site is on the outer coastal plain of Cape May peninsula. Salt marsh wetlands along Mill Creek, Little Mill Creek and Bradley Run form the core of this site, along with adjacent hardwood swamp forests and mesic coastal plain mixed oak forests.

BOUNDARY JUSTIFICATION:

Contiguous wetlands and forest providing rare species habitat and buffers form the primary preserve, and some adjacent agricultural fields are included within the secondary preserve to consider runoff problems and the potential for revegetation.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

Several state endangered plants and one state endangered animal are documented at this site.

CONSERVATION INTENT:

Acquisition or conservation easements.

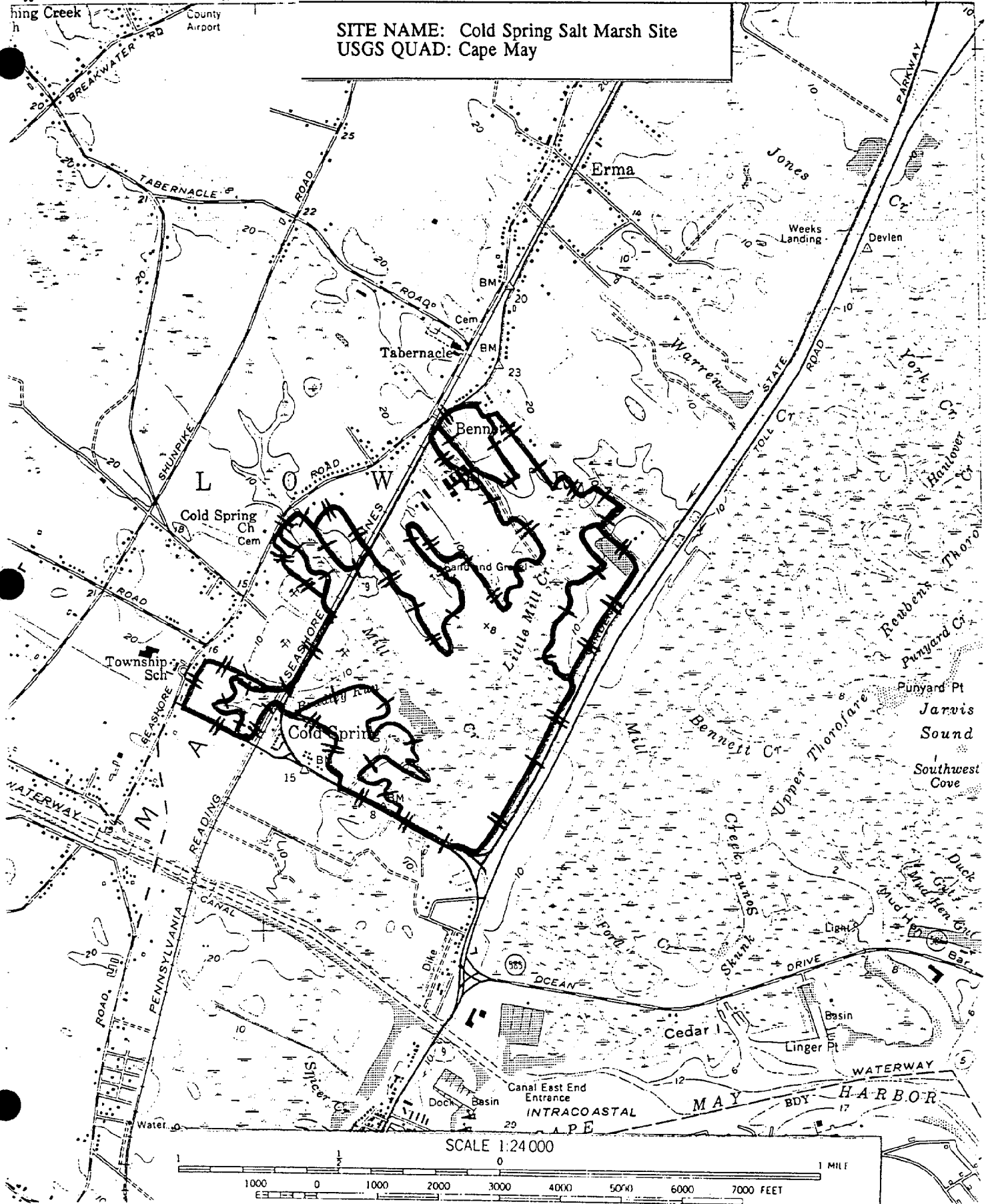
PROTECTION COMMENTS:

In private ownership.

MANAGEMENT NEEDS:

Unknown

King Creek



COLD SPRING GRAVEL PIT SITE

QUADNAME:
CAPE MAY

QUADCODE:
3807488

LOCAL JURISDICTION:
LOWER TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

This site is on the outer coastal plain of Cape May peninsula. It is an abandoned gravel pit which was excavated to near the water table surface in most of the pit, creating seasonally saturated soils. Parts of the pit were excavated to below the water table, creating permanent ponds.

BOUNDARY JUSTIFICATION:

Primary bounds are defined by the limits of the excavation. Secondary bounds are defined by the fringe of vegetation surrounding the pit.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

Contains a small population of a globally imperiled plant species. Also, one state endangered animal and several state endangered plants have historically been documented from this site.

CONSERVATION INTENT:

Registry and eventual acquisition.

PROTECTION COMMENTS:

In private ownership?

MANAGEMENT NEEDS:

To arrest the process of succession as needed by removing woody plant invaders.



COLD SPRING WOODS SITE

QUADNAME:
CAPE MAY

QUADCODE:
3807488

LOCAL JURISDICTION:
LOWER TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

This site is on the outer coastal plain of Cape May peninsula, about 3.5 to 4.5 miles from the southern tip. This site represents the southernmost large patch of forest on Cape May peninsula (nearly 500 acres as of fall 1991), although residential development is encroaching rapidly here. Plant communities include dry oak-pine forest, mesic coastal plain mixed oak forest, hardwood swamp, and intermittent coastal plain ponds.

BOUNDARY JUSTIFICATION:

The primary boundary is defined by contiguous forest patches interrupted only by local roads, and the secondary boundary by contiguous fields which could be revegetated.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

Because this site is an "island" of forest cover in a matrix of development and agriculture, and because of its southerly position on Cape May peninsula, this site is likely an important concentration area for migrating neotropical passerines. The mesic coastal plain mixed oak forest and intermittent coastal plain ponds have historically supported a number of state endangered plant species, although some of the ponds and woods appear to be impacted by nearby development.

CONSERVATION INTENT:

Fee title acquisition.

PROTECTION COMMENTS:

Entire site is privately owned and threatened by residential development. Cold Spring Church property may be available.

MANAGEMENT NEEDS:

Some management will be needed to restore the intermittent ponds.

BENNETT BOGS

QUADNAME:
CAPE MAY

QUADCODE:
3807488

LOCAL JURISDICTION:
LOWER TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

This site is on the outer coastal plain of Cape May peninsula, about 8 miles from the southern tip. It is a low-lying area of mesic coastal plain mixed oak forest with three remaining intermittent coastal plain ponds from an original five pond wetland system. Ponds are surrounded by swamp woodland buffer of red maple, sweet gum, holly, and willow oak. A small parking lot and a trail system through the preserve have been established. Surrounding land use includes residential areas and farmland.

BOUNDARY JUSTIFICATION:

Primary boundaries were drawn to include three intermittent ponds and adjacent forested buffers east of Shunpike Road and a wet area west of Shunpike Road, all of which contain rare plant species or natural communities. Secondary boundaries include the watershed which likely influences the hydrology and water quality in the ponds.

BIODIVERSITY SIGNIFICANCE: B2

BIODIVERSITY COMMENTS:

High quality site for globally imperilled plant species and intermittent coastal plain pond community. There is a concentration of state rare plants and animals.

CONSERVATION INTENT:

Acquisition of available tracts within primary and secondary boundary. Registry, management agreements or conservation easements should be sought for other tracts.

PROTECTION COMMENTS:

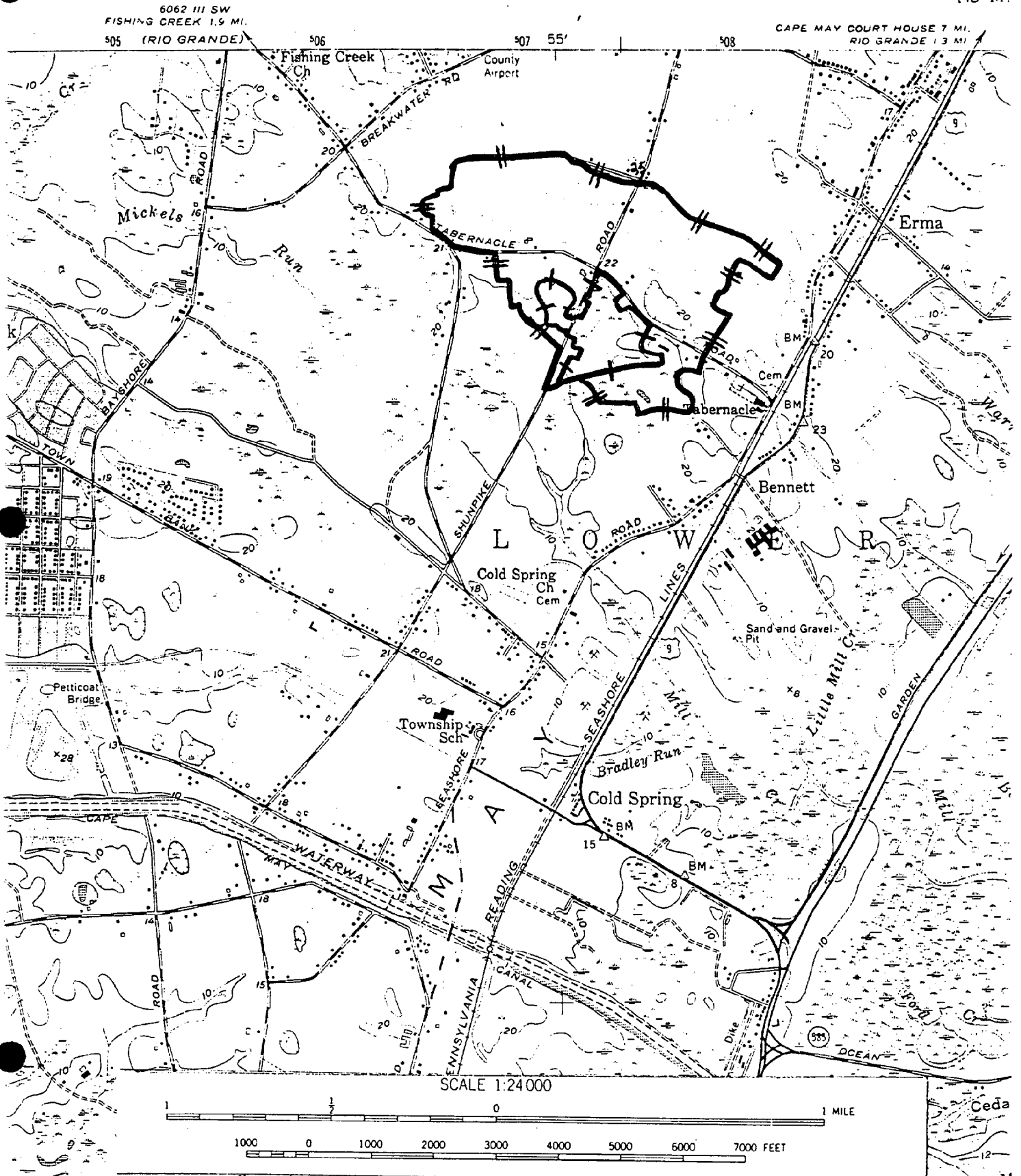
Most of the primary preserve has been acquired. Other landowners within primary boundaries have been contacted as of 90-06-22. No activity on secondary preserve.

MANAGEMENT NEEDS:

Need to control well water use and maintain hydrologic regime within the watershed to assure intermittent pond hydrology is maintained. May want to consider filling ditches if possible. Plant collectors and ORV's are a problem. Control of aggressive plant species and succession may be needed.

SITE NAME: Bennett Bogs Site
USGS QUAD: Cape May

CA
NE
7.5 MI



RIO GRANDE SWAMP SITE

QUADNAME:	QUADCODE:
RIO GRANDE	3907418
STONE HARBOR	3907417

LOCAL JURISDICTION:
Middle Twp.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

This site is on the outer coastal plain of Cape May peninsula and is a rich area of wetlands and mesic uplands at the headwaters of Fishing Creek. Pumping Station Pond at Rt. 47 serves as a water supply for Wildwood. Natural communities include dry oak-pine forest, mesic coastal plain mixed oak forest, old growth hardwood swamp, Cape May lowland swamp, and intermittent coastal plain pond. American beech, tulip popular and basket oak join the more common and typical canopy species in many of the transition zones between hardwood swamps and and mesic mixed oak uplands.

BOUNDARY JUSTIFICATION:

Primary bounds encompass rare species habitats, rare Cape May lowland swamp, old growth hardwood swamp, and intermittent pond communities, all contiguous wetlands and mesic mixed oak uplands and critical upland forest buffers within the watershed. Secondary bounds include agricultural fields and disturbed or sparsely developed areas within the watershed.

BIODIVERSITY SIGNIFICANCE: B2

BIODIVERSITY COMMENTS:

This site contains an excellent example of a rare Cape May lowland swamp community, an intermittent pond, and a concentration of State Endangered and Special Concern plant and animal species.

CONSERVATION INTENT:

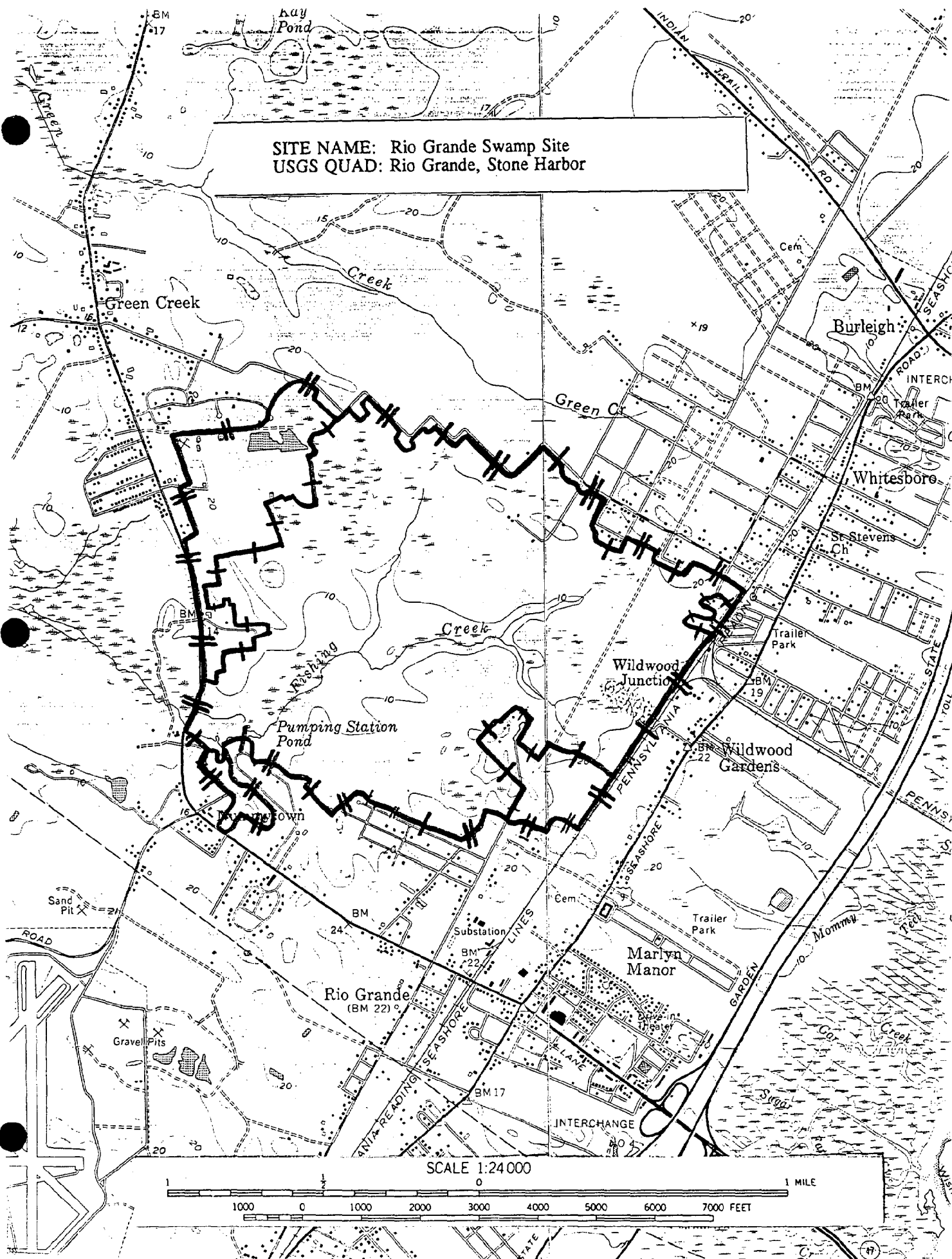
Cape May NWR acquisition area should be adjusted to include the entire primary preserve; about 70% is proposed for acquisition as of 92-03-09. . Acquire portions of secondary preserve tracts with forest cover or sand mine ponds, and as a last priority, agricultural fields.

PROTECTION COMMENTS:

About 70% of the site is owned by the City of Wildwood as watershed lands and is within the proposed USFWS Cape May National Wildlife Refuge acquisition area. Other lands in the site are in private ownership. Contact with Wildwood by USFWS in 1991 indicated no immediate changes in the city's land and water use of the site is planned. As a result, this site has become a low priority for USFWS acquisition at present.

MANAGEMENT NEEDS:

There is a need to monitor the rate of water removal from the watershed and the impacts to local hydrology, if any.



INDIAN TRAIL SWAMP SITE

QUADNAME:
RIO GRANDE
STONE HARBOR

QUADCODE:
3907418
3907417

LOCAL JURISDICTION:
Middle Twp.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

This site is on the outer coastal plain of Cape May peninsula and contains the headwaters and critical upper watersheds of Dias Creek and Green Creek. Communities include dry oak-pine forest, mesic coastal plain mixed oak forest, Liquidambar-Acer swamp, Cape May lowland swamp, and intermittent coastal plain pond.

BOUNDARY JUSTIFICATION:

The primary boundary takes in almost all forested areas within the upper watersheds of Green Creek and Dias Creek, including rare plant and animal habitats and such rare communities as an intermittent pond, Cape May lowland swamp, and locally rare dry oak-pine forest. Mesic mixed oak forest rich with southern tree species and providing dense forest interior habitat for many rare bird species is also included. A few agricultural fields near Kay Pond which are likely impacting upon water quality are included in the primary preserve to emphasize the need for buffer revegetation. The few secondary bounds not overlapping with the primary bounds take in sparsely developed areas, agricultural fields, or gravel pits within the critical watershed.

BIODIVERSITY SIGNIFICANCE: B2

BIODIVERSITY COMMENTS:

The site contains excellent examples of rare Cape May lowland swamp and intermittent coastal plain pond communities, an excellent population of a globally imperilled State Endangered plant species, and a concentration of additional state and globally rare plant species. A dry oak-pine forest over 300 acres in size, which has become rare on Cape May peninsula due to development, represents the southern most major occurrence of this community type in the state. Forests within the site, particularly wetlands and mesic uplands, provide important forest interior habitat for many imperilled raptors and migrating neotropical passerines.

CONSERVATION INTENT:

The site should be acquired fee-simple. Much of the site falls within the proposed Cape May NWR acquisition area, although some critical areas were omitted. Adjustments to the acquisition area planned for 1992-93 by USFWS should pick up the remainder of this site.

PROTECTION COMMENTS:

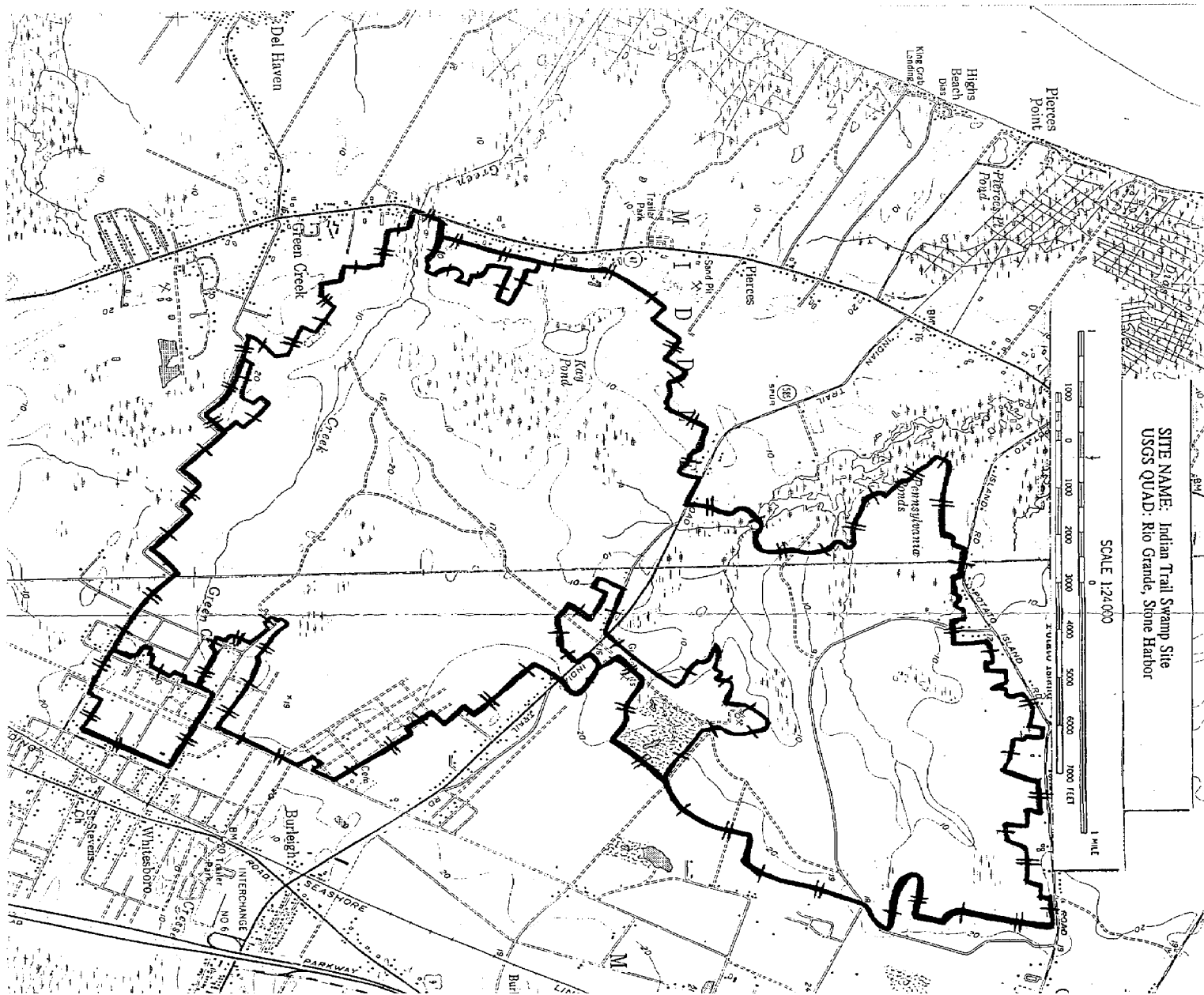
A few tracts have been acquired by USFWS as of 92-03-09 and most landowners within the original acquisition area have been contacted by USFWS with an offer to purchase.

MANAGEMENT NEEDS:

Revegetation of fields nearest Kay Pond.

SITE NAME: Indian Trail Swamp Site
USGS QUAD: Rio Grande, Stone Harbor

SCALE 1:24,000



GREEN CREEK SITE

QUADNAME:
RIO GRANDE

QUADCODE:
3907418

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula located on the Delaware Bayshore, adjacent to salt marshes of Green and Dias Creek. Communities found include mesic coastal plain mixed oak forest, fringes of hardwood swamp, and intermittent coastal plain ponds.

BOUNDARY JUSTIFICATION:

The primary boundary includes endangered species habitat at the salt marsh fringe, a number of intermittent ponds, and the higher quality mesic coastal plain mixed oak forest. Secondary bounds include additional mesic uplands and salt marsh as buffers.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

Two state endangered plant species and two special concern plant species are known from this site. Three or more small intermittent ponds are found on site.

CONSERVATION INTENT:

Most or all of the site is within the USFWS Cape May NWR acquisition area.

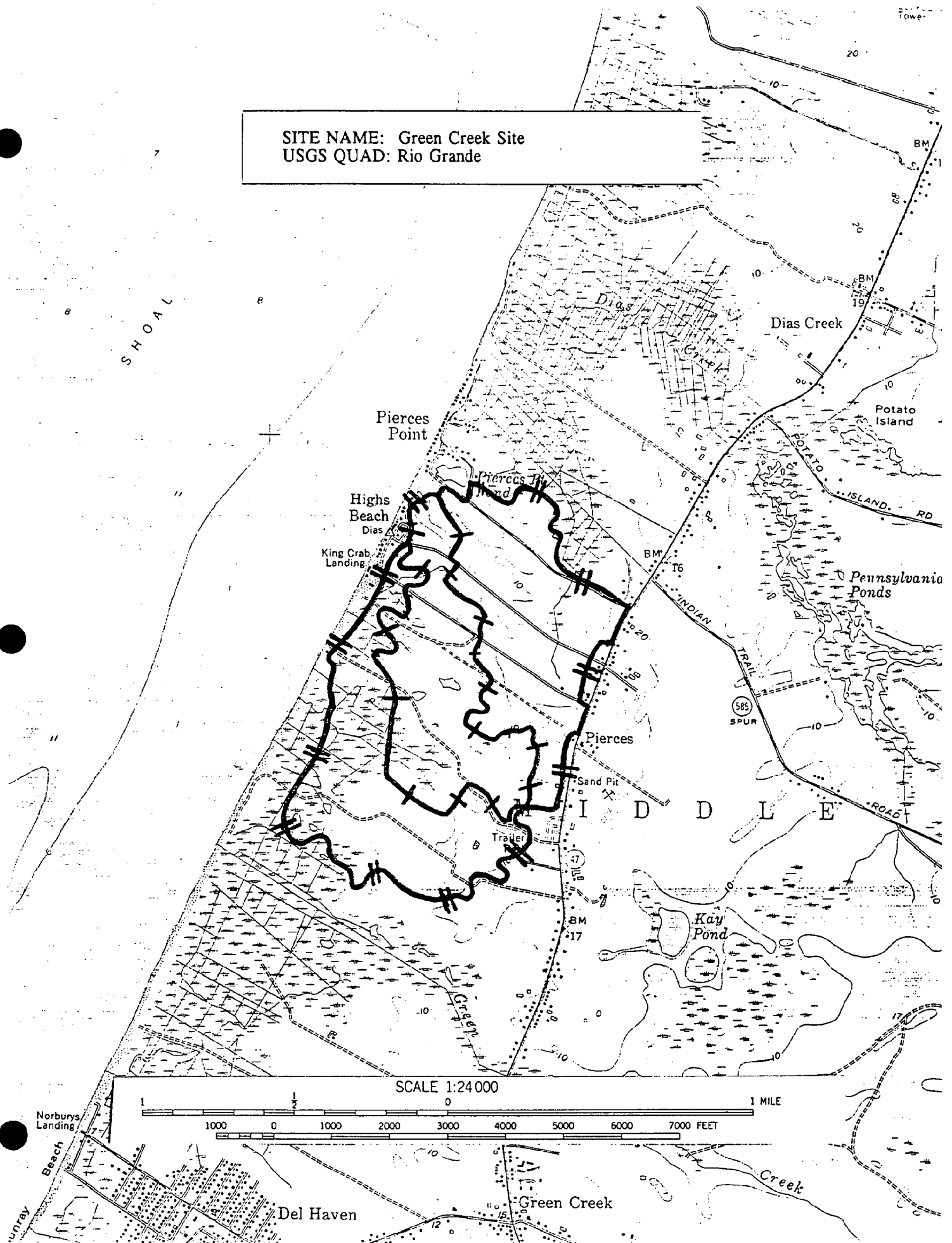
PROTECTION COMMENTS:

As of 92-03-09, many of the landowners have been contacted by USFWS with offers to buy.

MANAGEMENT NEEDS:

May need management of woody species by cutting in endangered species habitat.

SITE NAME: Green Creek Site
USGS QUAD: Rio Grande



PIERCES PIT SITE

QUADNAME:
RIO GRANDE

QUADCODE:
3907418

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula. There are three sand pits excavated to the watertable, creating saturated sandy soils and seasonally flooded areas. Agricultural fields and dry oak-pine forest fragments occupy adjacent areas.

BOUNDARY JUSTIFICATION:

Primary bounds include the 3 separate pits, and secondary bounds include a minimal buffer of agricultural field or forest.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

The pits have a concentration of several state imperiled plant species.

CONSERVATION INTENT:

Acquisition of available tracts, particularly the pits. Registry or conservation easements for others.

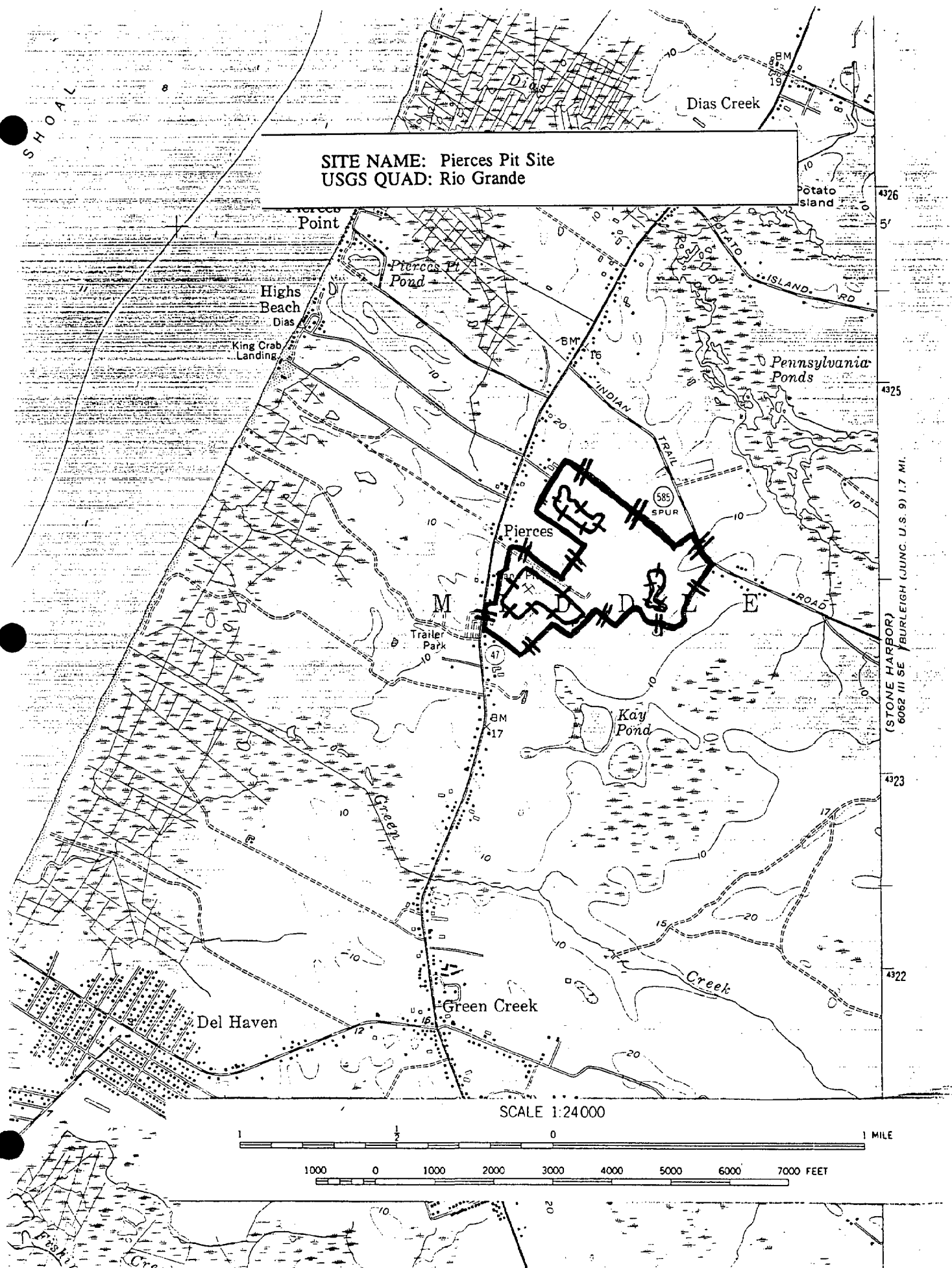
PROTECTION COMMENTS:

The entire site is privately owned and outside the proposed Cape May NWR acquisition area.

MANAGEMENT NEEDS:

Need to keep succession of woody species in check. Need to maintain hydrologic regime.

SITE NAME: Pierces Pit Site
USGS QUAD: Rio Grande



LIZARD TAIL SWAMP SITE

QUADNAME:
STONE HARBOR
WOODBINE

QUADCODE:
3907417
3907427

LOCAL JURISDICTION:
Middle Twp.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula, located in the headwaters of Bidwell Creek east of Goshen Road (Rt. 615). Communities include dry oak-pine forest, dry pine-oak forest, mesic coastal plain mixed oak forest, Cape May lowland swamp, Liquidambar-Acer swamp, and brackish tidal marsh complex.

BOUNDARY JUSTIFICATION:

The primary boundary includes all wetlands and the most proximal, undeveloped upland buffers within the watershed, including rare Cape May lowland swamp, or hardwood swamp and mesic uplands with rare southern tree species present at low densities. Secondary bounds include cleared or developed portions of the watershed, and dry oak-pine forest areas less proximal to wetlands.

BIODIVERSITY SIGNIFICANCE: B2

BIODIVERSITY COMMENTS:

An excellent example of a globally rare Cape May lowland swamp community. Good to excellent quality state and globally significant plant and animal occurrences are documented on site.

CONSERVATION INTENT:

The most significant part of this site falls within the original Cape May NWR acquisition area and has been purchased by USFWS. Additional portions of the site should be added to the acquisition area as priorities permit.

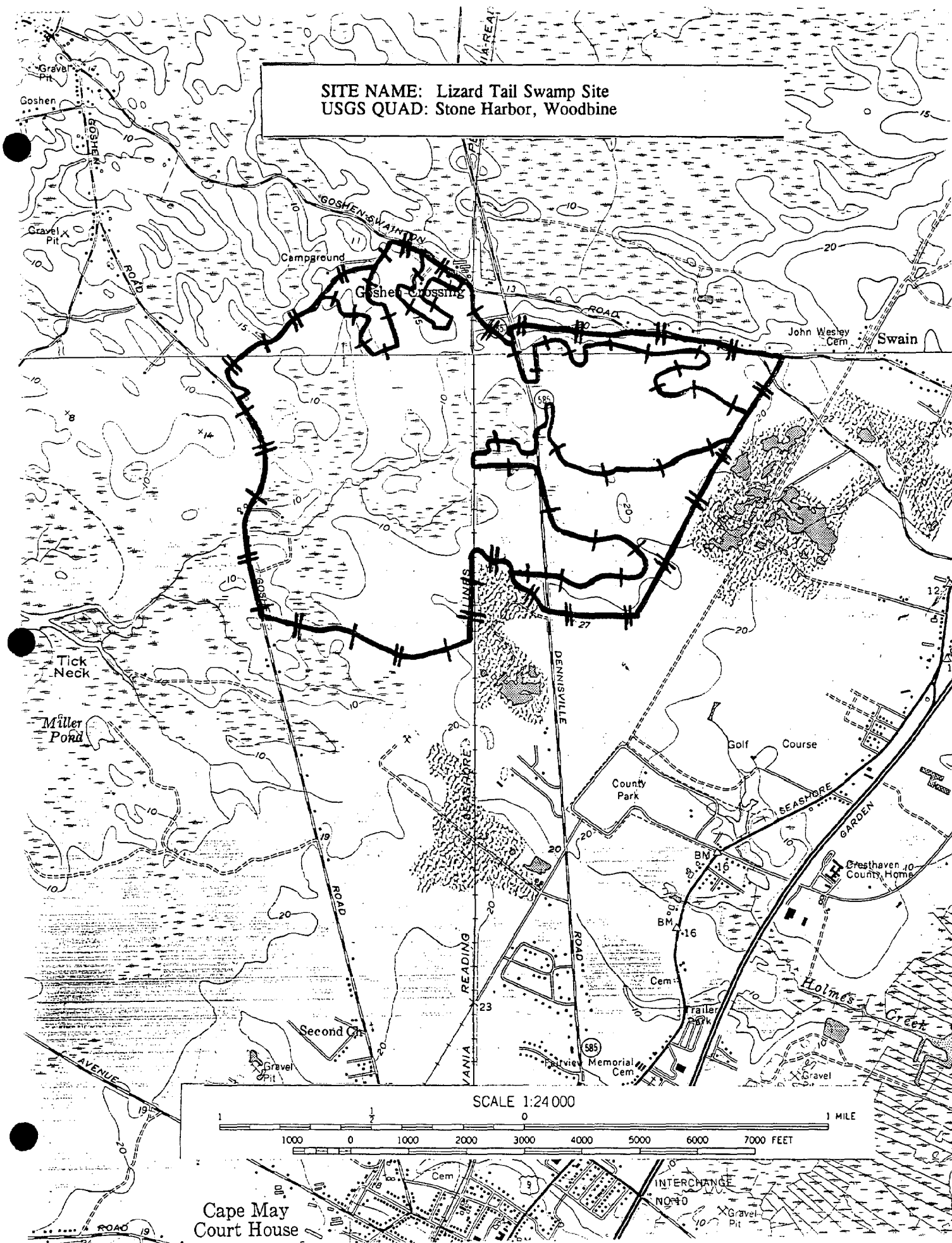
PROTECTION COMMENTS:

The most significant portion of this site's primary preserve has been acquired by USFWS. Other parcels within the primary and secondary site remain in private ownership and are seriously threatened by sand mining, residential development and campground expansions.

MANAGEMENT NEEDS:

Filling or closing some ditches.

SITE NAME: Lizard Tail Swamp Site
USGS QUAD: Stone Harbor, Woodbine



BASEBALL SWAMP SITE

QUADNAME:
STONE HARBOR

QUADCODE:
3907417

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula, in a headwater tributary of Bidwell Creek. Communities include dry oak-pine forest, dry pine-oak forest, Cape May lowland swamp, and other hardwood swamps.

BOUNDARY JUSTIFICATION:

The primary bounds include the headwater wetland containing a federally threatened plant species and adjacent undisturbed uplands within the subwatershed. Secondary bounds include filled wetlands and cleared uplands in the adjacent Goshen Sports Complex.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

A good occurrence of a state endangered, federally threatened plant species.

CONSERVATION INTENT:

Primary bounds of site should be added to Cape May NWR acquisition area and purchased by USFWS. Management agreement with Middle Twp. for sports complex.

PROTECTION COMMENTS:

Owned by Middle Twp?

MANAGEMENT NEEDS:

May need to control runoff of stormwater, sediments and fertilizer from adjacent sports complex.

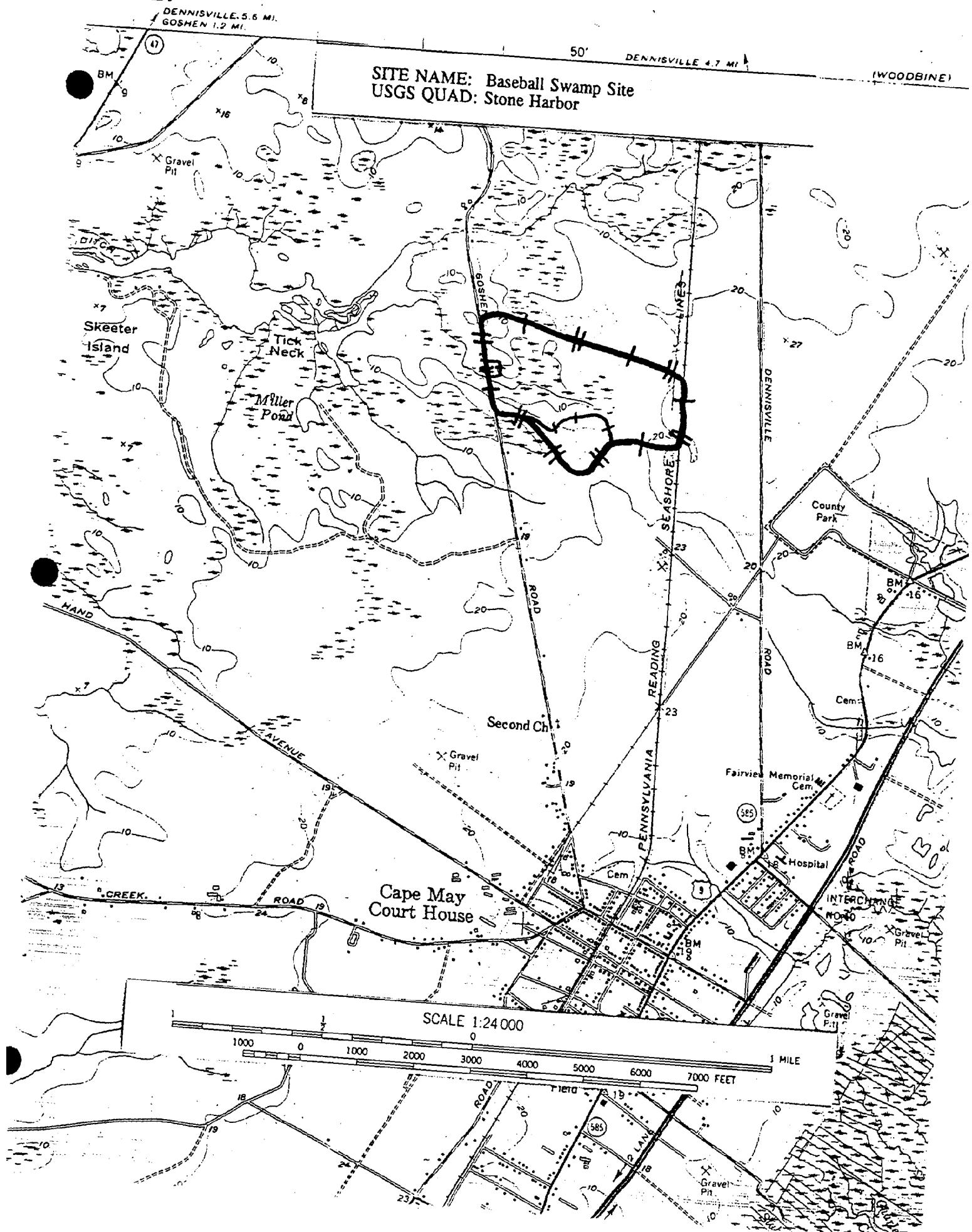
INTERIOR
SURVEY

DENNISVILLE 5.6 MI.
GOSHEN 1.2 MI.

50' DENNISVILLE 4.7 MI.

(WOODBINE)

SITE NAME: Baseball Swamp Site
USGS QUAD: Stone Harbor



CAPE MAY COURT HOUSE MAINTENANCE YARD SITE

QUADNAME:
STONE HARBOR

QUADCODE:
3907417

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula. This is a pair of abandoned sand and gravel mines excavated to below water table, in some parts being very deep. The south pond has a boat launch, swimming beach and clubhouse? at the shore and is used as a water supply. The north pond has a small boat launch, being much less impacted and having some shallow coves.

BOUNDARY JUSTIFICATION:

Primary bounds include the pits, and secondary bounds include a small buffer around them.

BIODIVERSITY SIGNIFICANCE: B5

BIODIVERSITY COMMENTS:

Good to fair occurrences of two S2 animal species which are state endangered. (Last observed in 1981).

CONSERVATION INTENT:

Management agreement with owner (Local government).

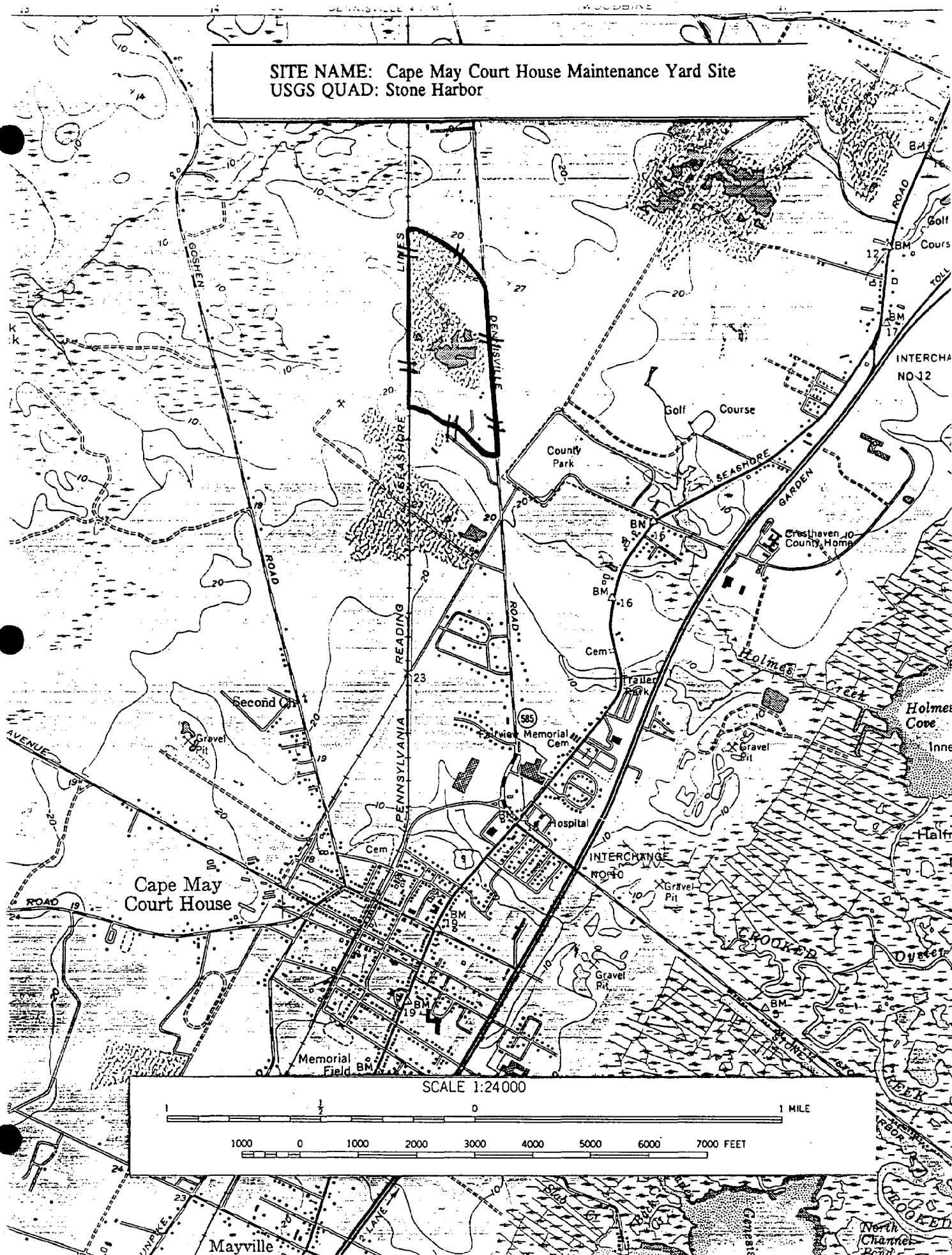
PROTECTION COMMENTS:

A single owner? (Local government?) appears to manage the site for recreational use.

MANAGEMENT NEEDS:

There is a serious threat to rare animals if fish have been introduced, as boat use may suggest. If fish are present, management is needed to remove of fish populations from pond, or barriers need to be erected to exclude them from shallow coves.

SITE NAME: Cape May Court House Maintenance Yard Site
USGS QUAD: Stone Harbor



MAYVILLE SITE

QUADNAME:
STONE HARBOR

QUADCODE:
3907417

LOCAL JURISDICTION:
Middle Twp.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula, and includes a 14 acre abandoned gravel pit within a patch of forest at the mainland/salt marsh interface. Wetlands of Shell Bed Creek and an unnamed creek cross the site. Communities include mesic coastal plain mixed oak forest, hardwood swamp and successional areas.

BOUNDARY JUSTIFICATION:

Primary bounds include State endangered plant habitat at the gravel pit. Secondary bounds include buffers and potential habitat for the rare plant as well as forested areas along the coast which may be concentration areas for migrating birds.

BIODIVERSITY SIGNIFICANCE: B5

BIODIVERSITY COMMENTS:

A fair occurrence of a State endangered plant species. One of the few remaining patches of forest cover along the Atlantic mainland/salt marsh interface, so may be significant for migrating birds.

CONSERVATION INTENT:

Acquisition of entire site.

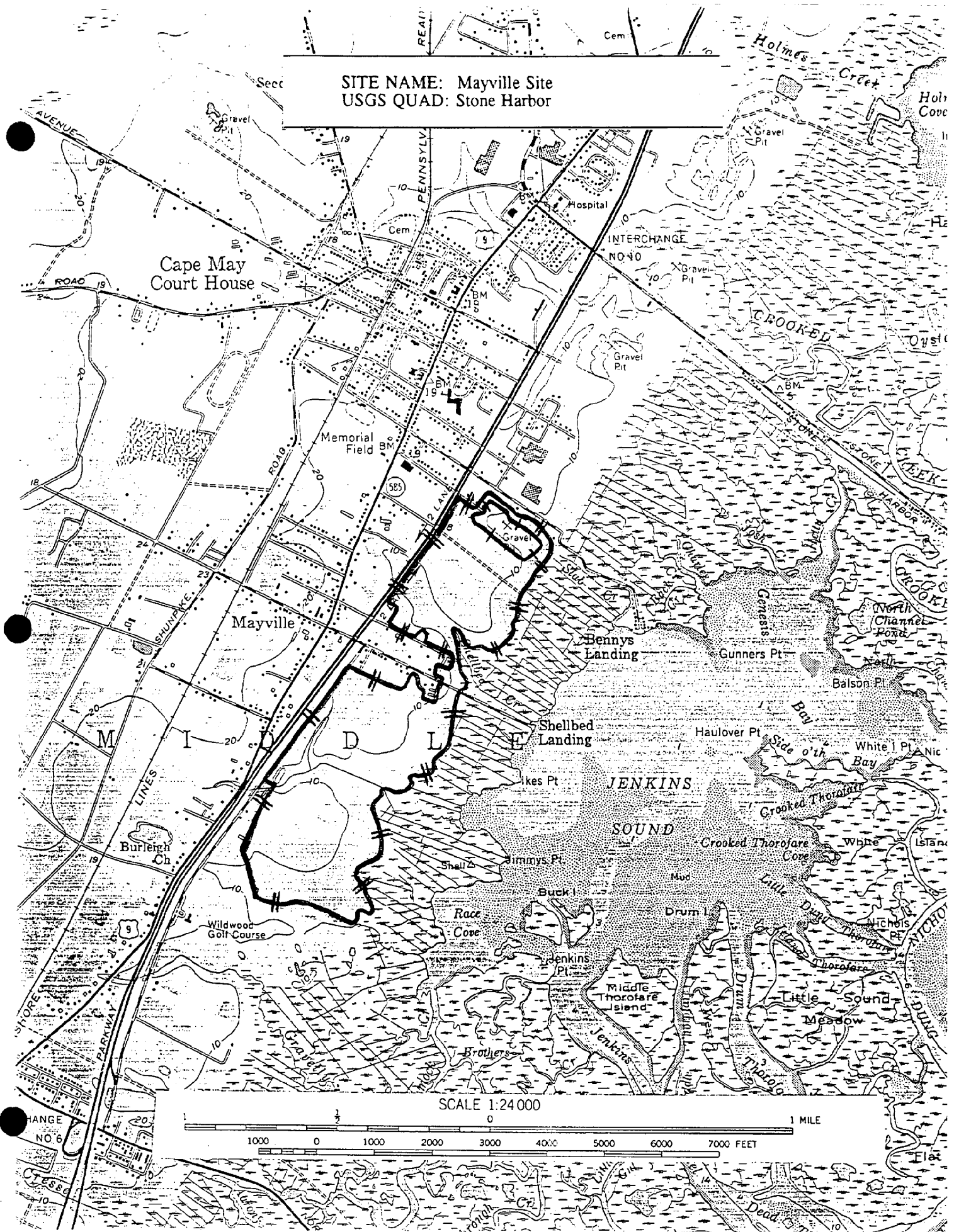
PROTECTION COMMENTS:

In private ownership.

MANAGEMENT NEEDS:

Succession is overtaking gravel pit, so cutting or burning of woody vegetation is needed to maintain open habitat.

SITE NAME: Mayville Site
USGS QUAD: Stone Harbor



COURT HOUSE PIT SITE

QUADNAME:
STONE HARBOR

QUADCODE:
3907417

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is located on the outer coastal plain of Cape May peninsula. There are a series of sand pits excavated to below water table level, creating permanent to seasonal ponds. Communities include dry oak-pine forest, dry pine-oak forest, and hardwood swamps at the headwaters of Skeeter Island Creek and Bidwell Creek.

BOUNDARY JUSTIFICATION:

The primary bounds include the sand pit breeding ponds of a state endangered animal, as well as hardwood swamp and dry oak-pine forest providing foraging habitat and linkage to protected USFWS lands with additional breeding habitat. Two other state imperiled animals were documented historically from these uplands as well. Secondary bounds include uplands along Hand Ave. (Rt. 658) and Goshen Road (Rt. 615), where low intensity development has already occurred and additional growth should be monitored and limited.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

There is a good occurrence of a State endangered animal on site, and there are historical records for three other state imperiled animals. A good example of dry oak-pine forest represents one of a few undeveloped stands exceeding 100 acres remaining on Cape May peninsula.

CONSERVATION INTENT:

Acquisition of primary preserve area as soon as possible; under heavy development pressure. The site is presently outside the Cape May NWR acquisition area, although it is immediately adjacent to it. The site should be added in the next round of acquisition area revisions.

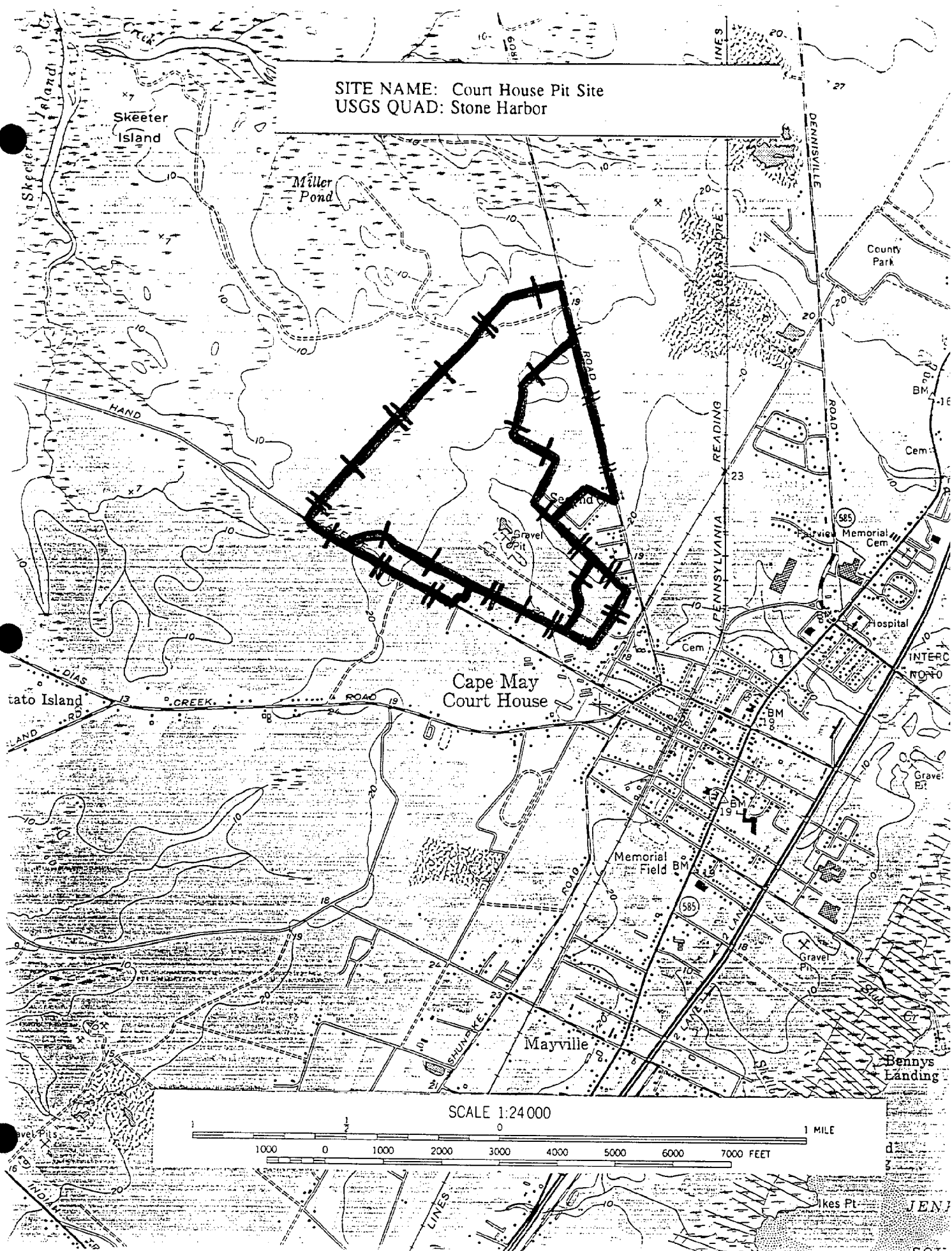
PROTECTION COMMENTS:

Under private (and township?) ownership.

MANAGEMENT NEEDS:

Need to maintain local water table levels and water quality, to preserve pond habitat.

SITE NAME: Court House Pit Site
USGS QUAD: Stone Harbor



BUCKS AVENUE SITE

QUADNAME:
WOODBINE
STONE HARBOR

QUADCODE:
3907427
3907417

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula, at the headwaters and upper watershed of Goshen Creek. Communities include dry oak-pine forest, mesic coastal plain mixed oak forest, hardwood swamp (including some older growth stands), and several intermittent coastal plain ponds. A series of paleodunes in the uplands are suggested by contour patterns.

BOUNDARY JUSTIFICATION:

The primary boundary includes globally rare intermittent pond communities and other wetlands with state endangered plant species, as well as undisturbed upland buffers. Secondary bounds include disturbed or less critical upland buffers within the watershed and additional wetlands downstream from known rare plant occurrences.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

Good occurrence of a globally rare plant species, and a concentration of good quality, globally rare intermittent coastal plain pond communities.

CONSERVATION INTENT:

A small portion of the site is within the Cape May NWR acquisition area. The acquisition area should be expanded to include this entire, highly significant site.

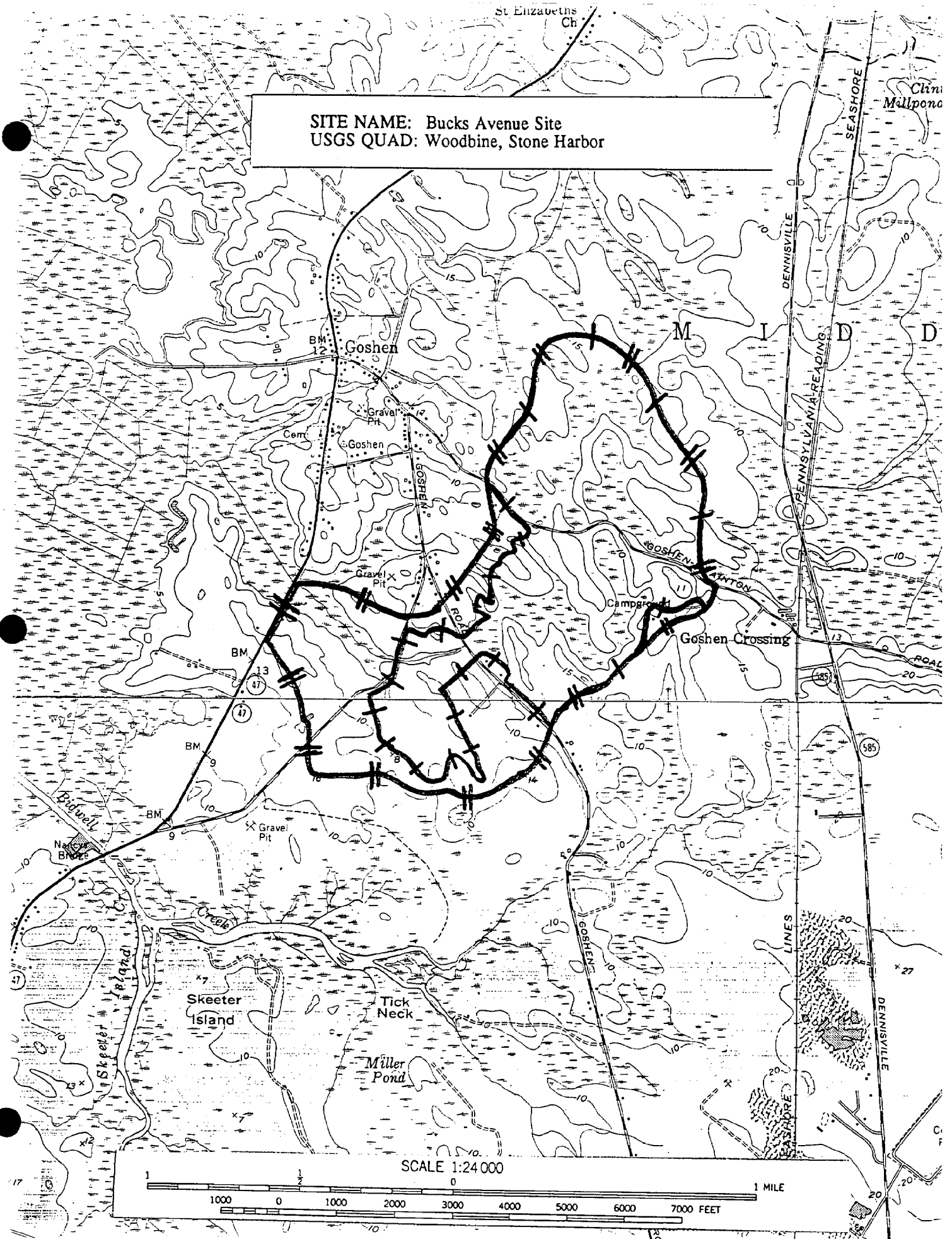
PROTECTION COMMENTS:

Mostly privately owned. A few single family dwellings have been built along Goshen Landing Road. Two tracts have been acquired by USFWS as of 92-03-09.

MANAGEMENT NEEDS:

Management is needed to reduce threats from residential development, water table lowering, agricultural runoff, and ORV use in ponds.

SITE NAME: Bucks Avenue Site
USGS QUAD: Woodbine, Stone Harbor



CLERMONT BOG SITE

QUADNAME:
WOODBINE

QUADCODE:
3907427

LOCAL JURISDICTION:
DENNIS TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula and consists of a series of hydrologically connected open water ponds and open bogs at the headwaters of Sluice Creek. These ponds are surrounded by a fringe of hardwood swamp and mesic coastal plain mixed oak forest. Dry oak-pine forests and successional pine-oak forests occur in the adjacent uplands.

BOUNDARY JUSTIFICATION:

The primary bounds include pond habitat for state imperiled plant and animal species, and the hardwood swamp and mesic mixed oak forests which surround and link them. Also included are adjacent dry oak-pine forests essential to the Cape May Corridor, and as site wetland buffers. The secondary boundary is defined by sparsely developed areas within the corridor or within the watershed of these wetlands.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

There are historical records for two state imperiled plants and one globally imperiled plant. A State endangered animal is recently documented.

CONSERVATION INTENT:

Addition to the Cape May NWR acquisition area is recommended for the primary preserve as soon as possible, before further loss to development occurs. Regulation of land use intensity in secondary preserve by zoning or management agreements is recommended.

PROTECTION COMMENTS:

The site is entirely privately owned and is not included in the Cape May NWR acquisition area, although it is adjacent to the Great Cedar Swamp Division.

MANAGEMENT NEEDS:

Removal of woody vegetation may be needed in one of the bogs.

4338

SEAVILLE (JUNC. U.S. 9) 2.9 MI.

4336

10'

OCEAN VIEW 1.3 MI.

4335

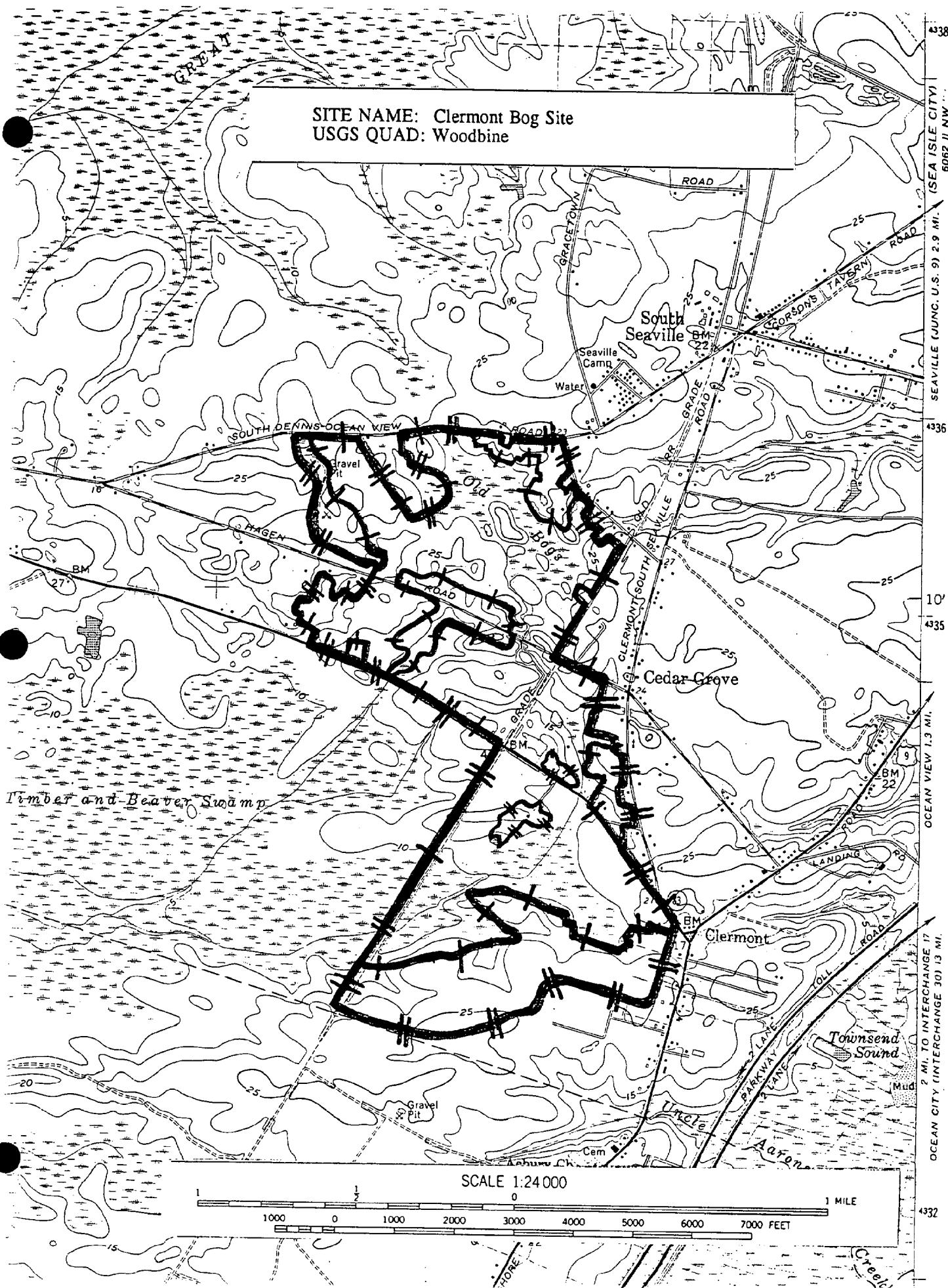
2 MI. TO INTERCHANGE 17

OCEAN CITY (INTERCHANGE 30) 13 MI.

4332

(SEA ISLE CITY)

6062 II NW ...



SWAINS STATION SITE

QUADNAME:
WOODBINE

QUADCODE:
3907427

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

This site is on the outer coastal plain of Cape May peninsula, in wetlands of Sluice Creek along an abandoned railroad grade near Swain.

BOUNDARY JUSTIFICATION:

Secondary bounds include the cleared railroad ROW within a mile of Swain's station.

BIODIVERSITY SIGNIFICANCE: B5

BIODIVERSITY COMMENTS:

There are historical records of a concentration of globally and state rare plants.

CONSERVATION INTENT:

Acquisition or management for unprotected areas.

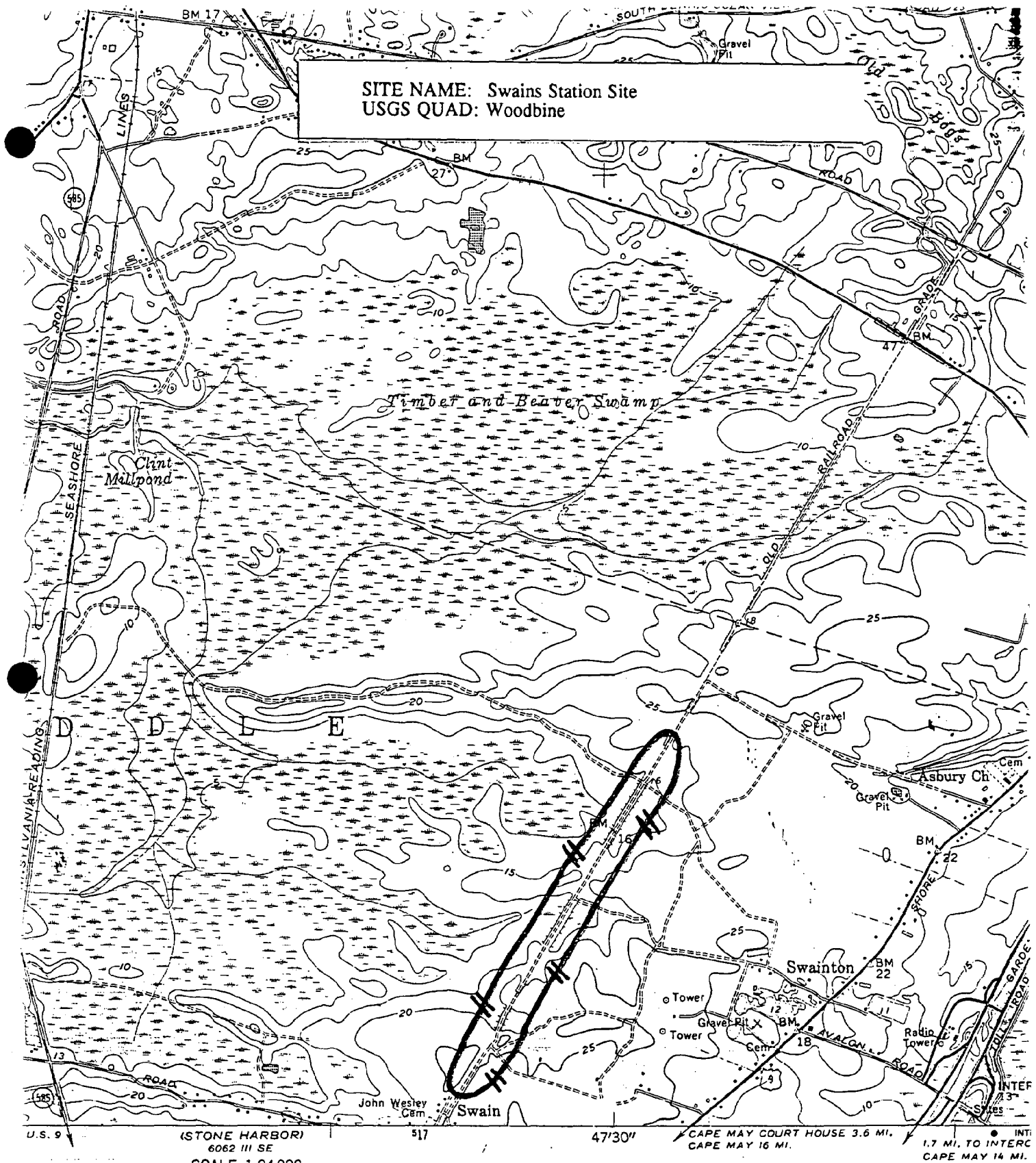
PROTECTION COMMENTS:

The site is partially within Timber and Beaver Swamp Wildlife Management Area, and partially in private ownership.

MANAGEMENT NEEDS:

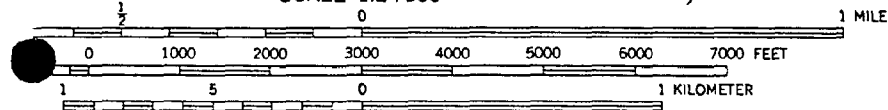
Mowing may be needed.

SITE NAME: Swains Station Site
USGS QUAD: Woodbine



U.S. 9 (STONE HARBOR) 6062 III SE

SCALE 1:24 000



CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929
SOUNDINGS IN FEET—DATUM IS MEAN LOW WATER

CAPE MAY COURT HOUSE 3.6 MI.
CAPE MAY 16 MI.

1.7 MI. TO INTER
CAPE MAY 14 MI.

Heavy-duty
Medium-duty



WWOC RADIO STATION SITE

QUADNAME:
WOODBINE

QUADCODE:
3907427

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: CAPE MAY CORRIDOR MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula, with a set of abandoned gravel pits which were excavated to below the water table level. Surrounding the pits are dry oak-pine forest, successional pine forest and agricultural fields. A radio station, residential development and a botanical garden? are adjacent or on-site land uses.

BOUNDARY JUSTIFICATION:

Primary bounds include pits and critical buffers; secondary bounds include additional, less critical buffers.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

There is a good occurrence of a State endangered animal, last observed in 1991.

CONSERVATION INTENT:

Management agreement with land owners.

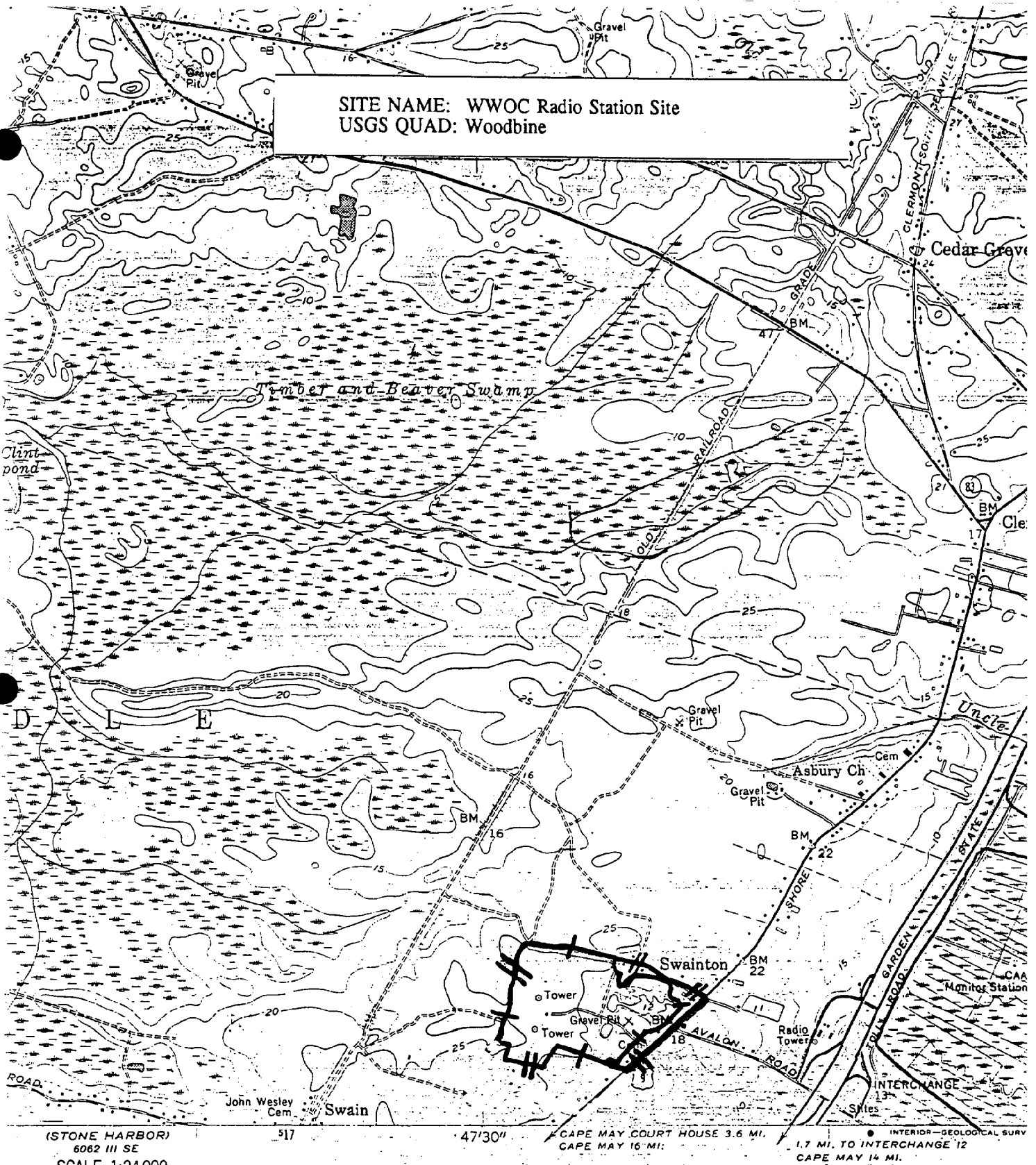
PROTECTION COMMENTS:

Most of the pond and immediate vicinity is within the property of "Leamings Run Botanical Gardens and Colonial Farm".

MANAGEMENT NEEDS:

Controll of runoff and maintain water quality in ponds.

SITE NAME: WWOC Radio Station Site
USGS QUAD: Woodbine



CONTOUR INTERVAL 5 FEET
DATUM IS MEAN SEA LEVEL
HIGHS IN FEET—DATUM IS MEAN LOW WATER

QUADRANGLE LOCATION

GREAT CEDAR SWAMP MACROSITE

QUADNAME:	QUADCODE:
WOODBINE	3907427
SEA ISLE CITY	3907426
MARMORA	3907436

LOCAL JURISDICTION:
DENNIS TWP.
UPPER TWP.

MACROSITE:

SITE DESCRIPTION:

The macrosite is on the outer coastal plain, the core of which is a large organic-soil wetland in the headwaters of both Dennis Creek and Cedar Swamp Creek. There are extensive areas of old growth hardwood swamp, atlantic white cedar swamp, mixed hardwood-atlantic white cedar swamp, and other forested wetland communities. Salt marsh occurs in the lower reaches of the Dennis Creek and Cedar Swamp Creek floodplains. In the uplands adjacent to most wetlands, large areas of mesic coastal plain mixed oak forest occur, and small amounts of dry oak-pine forest.

BOUNDARY JUSTIFICATION:

Secondary bounds include contiguous wetlands of Great Cedar Swamp and adjacent mesic coastal plain forests, as well as the least developed, more critical recharge zones within the watershed.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

There are a concentration of state imperilled animal occurrences and plants of special concern. There are excellent examples of old growth hardwood swamp and mesic coastal plain mixed oak forest.

CONSERVATION INTENT:

Fee simple acquisition, with high priority to undeveloped, forested portions and lower priority to agricultural fields and sand mines. Omit residential inholdings. Most of the macrosite has been targeted for acquisition by USFWS as part of the Cape May National Wildlife Refuge-Great Cedar Swamp Division. Revisions to the acquisition area planned for 1992-93 should add the remainder of this macrosite.

PROTECTION COMMENTS:

Nearly half of the macrosite has been acquired by USFWS as part of the Cape May NWR, as of March 1992. The rest remains in private ownership, although most property owners have been contacted by USFWS with offers to buy.

MANAGEMENT NEEDS:

Forestry management would be needed to restore the formerly more extensive atlantic white cedar stand, now occupied by mixed hardwood-atlantic white cedar swamp and small patches of pure cedar. Such management should be careful not to impact old-growth forests.

A detailed topographic map of the Great Cedar Swamp area. The map features contour lines indicating elevation, with labels such as 100, 120, 140, 160, 180, 200, 220, 240, 260, 280, 300, 320, 340, 360, 380, 400, 420, 440, 460, 480, 500, 520, 540, 560, 580, 600, 620, 640, 660, 680, 700, 720, 740, 760, 780, 800, 820, 840, 860, 880, 900, 920, 940, 960, 980, 1000, 1020, 1040, 1060, 1080, 1100, 1120, 1140, 1160, 1180, 1200, 1220, 1240, 1260, 1280, 1300, 1320, 1340, 1360, 1380, 1400, 1420, 1440, 1460, 1480, 1500, 1520, 1540, 1560, 1580, 1600, 1620, 1640, 1660, 1680, 1700, 1720, 1740, 1760, 1780, 1800, 1820, 1840, 1860, 1880, 1900, 1920, 1940, 1960, 1980, 2000, 2020, 2040, 2060, 2080, 2100, 2120, 2140, 2160, 2180, 2200, 2220, 2240, 2260, 2280, 2300, 2320, 2340, 2360, 2380, 2400, 2420, 2440, 2460, 2480, 2500, 2520, 2540, 2560, 2580, 2600, 2620, 2640, 2660, 2680, 2700, 2720, 2740, 2760, 2780, 2800, 2820, 2840, 2860, 2880, 2900, 2920, 2940, 2960, 2980, 3000, 3020, 3040, 3060, 3080, 3100, 3120, 3140, 3160, 3180, 3200, 3220, 3240, 3260, 3280, 3300, 3320, 3340, 3360, 3380, 3400, 3420, 3440, 3460, 3480, 3500, 3520, 3540, 3560, 3580, 3600, 3620, 3640, 3660, 3680, 3700, 3720, 3740, 3760, 3780, 3800, 3820, 3840, 3860, 3880, 3900, 3920, 3940, 3960, 3980, 4000, 4020, 4040, 4060, 4080, 4100, 4120, 4140, 4160, 4180, 4200, 4220, 4240, 4260, 4280, 4300, 4320, 4340, 4360, 4380, 4400, 4420, 4440, 4460, 4480, 4500, 4520, 4540, 4560, 4580, 4600, 4620, 4640, 4660, 4680, 4700, 4720, 4740, 4760, 4780, 4800, 4820, 4840, 4860, 4880, 4900, 4920, 4940, 4960, 4980, 5000, 5020, 5040, 5060, 5080, 5100, 5120, 5140, 5160, 5180, 5200, 5220, 5240, 5260, 5280, 5300, 5320, 5340, 5360, 5380, 5400, 5420, 5440, 5460, 5480, 5500, 5520, 5540, 5560, 5580, 5600, 5620, 5640, 5660, 5680, 5700, 5720, 5740, 5760, 5780, 5800, 5820, 5840, 5860, 5880, 5900, 5920, 5940, 5960, 5980, 6000, 6020, 6040, 6060, 6080, 6100, 6120, 6140, 6160, 6180, 6200, 6220, 6240, 6260, 6280, 6300, 6320, 6340, 6360, 6380, 6400, 6420, 6440, 6460, 6480, 6500, 6520, 6540, 6560, 6580, 6600, 6620, 6640, 6660, 6680, 6700, 6720, 6740, 6760, 6780, 6800, 6820, 6840, 6860, 6880, 6900, 6920, 6940, 6960, 6980, 7000, 7020, 7040, 7060, 7080, 7100, 7120, 7140, 7160, 7180, 7200, 7220, 7240, 7260, 7280, 7300, 7320, 7340, 7360, 7380, 7400, 7420, 7440, 7460, 7480, 7500, 7520, 7540, 7560, 7580, 7600, 7620, 7640, 7660, 7680, 7700, 7720, 7740, 7760, 7780, 7800, 7820, 7840, 7860, 7880, 7900, 7920, 7940, 7960, 7980, 8000, 8020, 8040, 8060, 8080, 8100, 8120, 8140, 8160, 8180, 8200, 8220, 8240, 8260, 8280, 8300, 8320, 8340, 8360, 8380, 8400, 8420, 8440, 8460, 8480, 8500, 8520, 8540, 8560, 8580, 8600, 8620, 8640, 8660, 8680, 8700, 8720, 8740, 8760, 8780, 8800, 8820, 8840, 8860, 8880, 8900, 8920, 8940, 8960, 8980, 9000, 9020, 9040, 9060, 9080, 9100, 9120, 9140, 9160, 9180, 9200, 9220, 9240, 9260, 9280, 9300, 9320, 9340, 9360, 9380, 9400, 9420, 9440, 9460, 9480, 9500, 9520, 9540, 9560, 9580, 9600, 9620, 9640, 9660, 9680, 9700, 9720, 9740, 9760, 9780, 9800, 9820, 9840, 9860, 9880, 9900, 9920, 9940, 9960, 9980, 10000. The map also shows various land use patterns, roads, and other geographical features. A legend in the bottom right corner provides information about the symbols used on the map, including a scale bar (Scale 1 inch = 1 mile) and a north arrow. The title "SITE NAME: Great Cedar Swamp Macrosite" and "USGS QUAD: Woodbine, Sea Isle City, Marmora" are located in the bottom left corner.

DENNIS CREEK MARSH MACROSITE

QUADNAME:
WOODBINE
HEISLERVILLE

QUADCODE:
3907427
3907428

LOCAL JURISDICTION:
DENNIS TWP.
MIDDLE TWP.

MACROSITE:

SITE DESCRIPTION:

The macrosite is on the outer coastal plain and occupies a broad area of salt marsh in the lower reaches of Dennis Creek, as well as forested wetlands and uplands fringing the marsh.

BOUNDARY JUSTIFICATION:

Primary bounds include critical salt marsh habitat for rare bird species and forested buffer areas up to Rt. 47. Secondary bounds include disturbed and developed areas along Rt. 47 which could impact the macrosite resources.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

Contains a good quality occurrence of a globally rare State Endangered bird species. There is a large, good quality stand of Atlantic white cedar (see Jakes Landing Cedar Swamp Site).

CONSERVATION INTENT:

Protection of unsecured lands through a combination of CAFRA wetland regulations, conservation easements and management agreements.

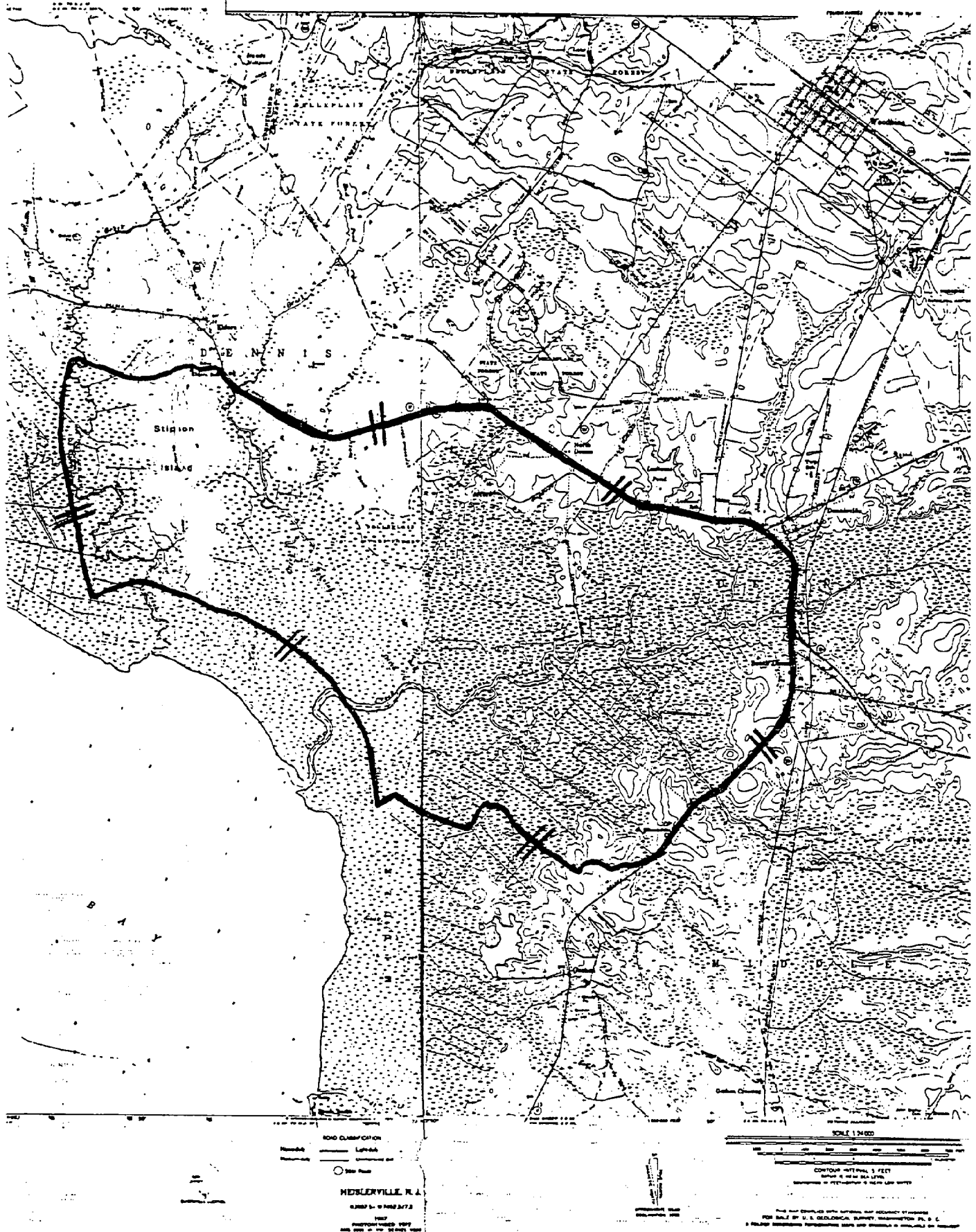
PROTECTION COMMENTS:

Most of the salt marsh is state owned as part of Dennis Creek WMA, and much of the forested area at and near Jakes Landing is state owned as part of Belleplain State Forest. Several privately owned outholdings exist.

MANAGEMENT NEEDS:

Need to maintain water quality in Dennis Creek and tributaries. Boat traffic in creek may interfere with endangered bird feeding activities so may need to be managed.

SITE NAME: Dennis Creek Marsh Macrosite
USGS QUAD: Woodbine, Heislerville



JAKES LANDING CEDAR SWAMP SITE

QUADNAME:
WOODBINE
HEISLERVILLE

QUADCODE:
3907427
3907428

LOCAL JURISDICTION:
DENNIS TWP.

MACROSITE: DENNIS CREEK MARSH MACROSITE

SITE DESCRIPTION:

This site is on the outer coastal plain at Jakes Landing near the Delaware Bay, and occupies the wetlands along the lower reaches of Old Robins Branch and "Ludlams Pond Branch" of Dennis Creek. Atlantic white cedar swamp occupies most of the forested wetlands, a high marsh-flooded forest transition zone occupies the edge of the salt marsh complex, and mesic coastal plain mixed oak forest, dry oak-pine forest, and successional pine forest occupy the uplands.

BOUNDARY JUSTIFICATION:

Primary bounds include this large Atlantic white cedar swamp and adjacent mesic coastal plain mixed oak forest. Secondary bounds include adjacent high marsh-forest ecotone, dry oak-pine forest, agricultural fields and a sand mine.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

This site contains one of the largest stands of Atlantic white cedar swamp in the Delaware Bay area, although it has been cut recently and is regenerating in most areas. Due to its geographic position, Jakes Landing may be an important concentration area for a number of rare bird species during migration.

CONSERVATION INTENT:

A management agreement is needed with Belleplain State Forest/Division of Parks and Forestry to maintain this cedar swamp and the forest interior habitats needed by migrating birds. Fee title acquisition is needed to secure outholdings of privately owned land within the site.

PROTECTION COMMENTS:

Most of the site is state owned as part of Belleplain State Forest.

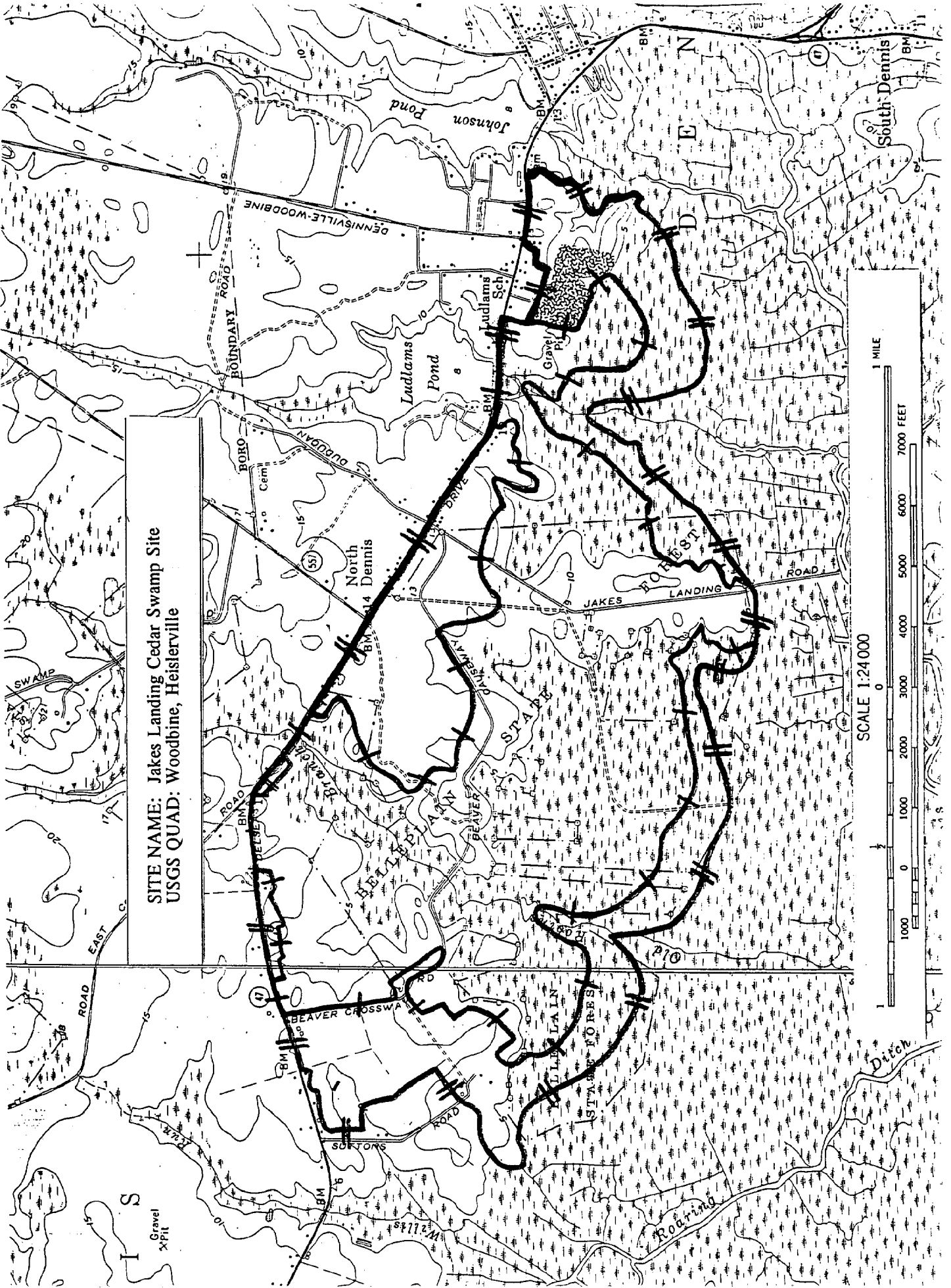
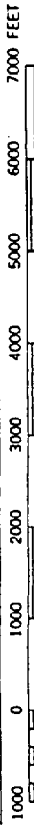
MANAGEMENT NEEDS:

Management of the cedar stand is needed to encourage regeneration where it is not occurring, and to establish some old growth areas (i.e. no tree harvesting by clearcutting in selected areas).

SITE NAME: Jakes Landing Cedar Swamp Site
USGS QUAD: Woodbine, Heislerville

SCALE 1:24000

1 MILE



AVALON-STONE HARBOR MARSH MACROSITE

QUADNAME:	QUADCODE:
AVALON	3907416
STONE HARBOR	3907417
SEA ISLE CITY	3907426
WOODBINE	3907427

LOCAL JURISDICTION:

Middle Twp.
Dennis Twp.
Avalon Boro
Sea Isle City

MACROSITE:

SITE DESCRIPTION:

This macrosite occurs on the outer coastal plain behind a series of barrier islands. Tidal salt marsh interspersed with shallow backbays dominates, with a fringe of forested wetlands and mesic uplands on the west. Barrier islands on the east are heavily developed.

BOUNDARY JUSTIFICATION:

The secondary bounds include shore bird nesting areas and surrounding salt marsh complex, and patches of forest on the mainland edge which may be concentration area for migrating birds on the Atlantic flyway to rest and feed. The western bounds generally extend to the Garden State Parkway, or slightly beyond where the presence of tidal creeks or intact forest patches justify it.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

A concentration of state threatened bird species are documented from the salt marsh complex. Forested fringe areas may be important to migrating neotropical passerines.

CONSERVATION INTENT:

Acquisition of the forested upland and wetland fringes is necessary to protect them. Protection of the salt marsh complex is possible by CAFRA wetland regulations and conservation easements.

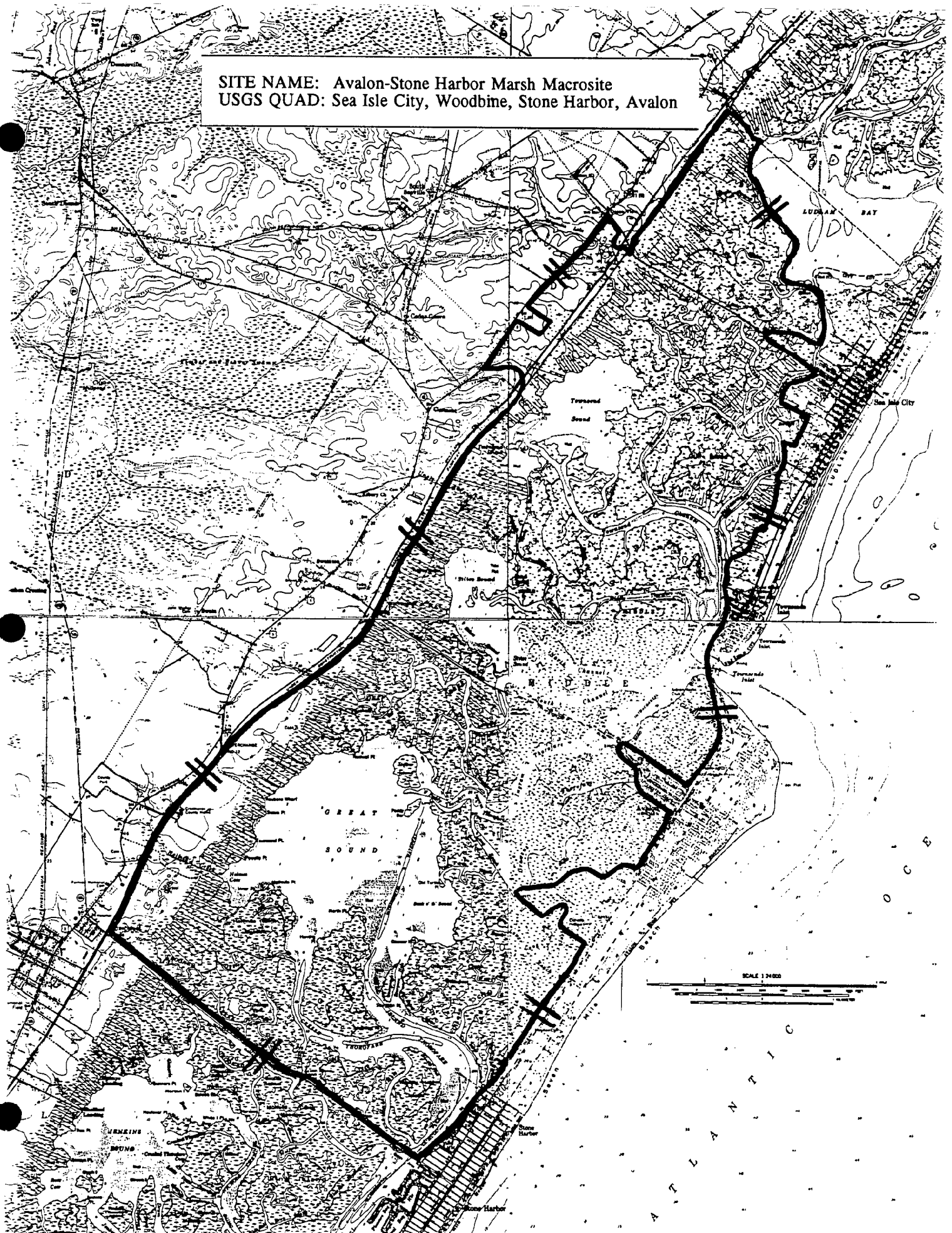
PROTECTION COMMENTS:

Most of the macrosite is privately owned.

MANAGEMENT NEEDS:

Maintenance of osprey nesting poles is needed.

SITE NAME: Avalon-Stone Harbor Marsh Macrosite
USGS QUAD: Sea Isle City, Woodbine, Stone Harbor, Avalon



CROOKED CREEK PIT SITE

QUADNAME:
STONE HARBOR

QUADCODE:
3907417

LOCAL JURISDICTION:
MIDDLE TWP.

MACROSITE: AVALON-STONE HARBOR MARSH MACROSITE

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula, adjacent to the mainland/salt marsh interface. There are a series of adjacent sand pits excavated to at or below the water table depth, creating small freshwater ponds. These pits are surrounded by about a 500 foot band of mesic coastal plain mixed oak forest.

BOUNDARY JUSTIFICATION:

Primary bounds include the main series of pits north of Crooked Creek. Secondary bounds include the forested buffer surrounding these pits.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

An excellent occurrence of a State endangered animal is documented on site, and there are historical records of another State endangered animal.

CONSERVATION INTENT:

Acquisition is needed as soon as possible, being under heavy development pressure.

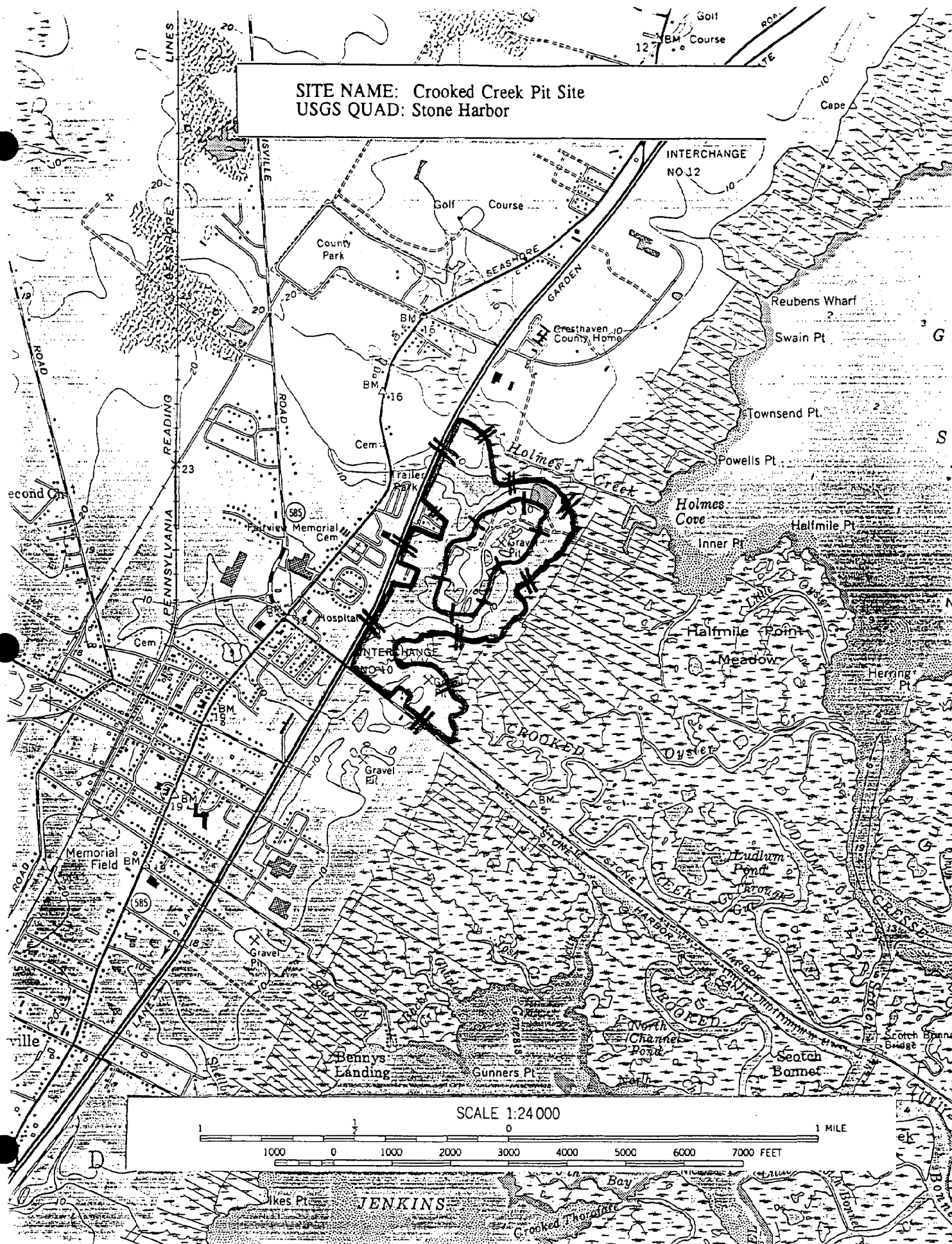
PROTECTION COMMENTS:

Under private ownership.

MANAGEMENT NEEDS:

Unknown.

SITE NAME: Crooked Creek Pit Site
USGS QUAD: Stone Harbor



DELAWARE BAYSHORE MACROSITE

QUADNAME:	QUADCODE:
PORT NORRIS	3907521
FORTESCUE	3907522
CEDARVILLE	3907532
BEN DAVIS POINT	3907533
HEISLERVILLE	3907428
RIO GRANDE	3907418
CAPE MAY	3807488

LOCAL JURISDICTION:
MANY

MACROSITE:

SITE DESCRIPTION:
Sandy beaches or sandy mudflats in front of eroding salt marsh sod banks, along the Delaware Bayshore. A thriving horseshoe crab population uses the beaches for breeding and egg laying.

BOUNDARY JUSTIFICATION:
Secondary bounds are drawn to include bayshore areas where horseshoe crabs lay eggs and feeding birds concentrate, from 0.5 miles north of the Cape May Canal to the Cohansey River, and an adjacent band of back marshes from 0.5 to 1 mile in width between Bidwell Creek and Cohansey River. The marsh boundary may be refined in the future. There are currently studies underway to evaluate the significance of the marshes for the birds.

BIODIVERSITY SIGNIFICANCE: B2

BIODIVERSITY COMMENTS:
High quality concentrations of spring migratory shorebirds. One of the most significant staging areas for these birds in the western hemisphere. Also, a number of state significant animal species are present within the site.

CONSERVATION INTENT:
The macrosite should be managed primarily by NJDEPE-Fish, Game & Wildlife. Acquisition of the highest quality tracts and registry for other tracts as they become available is recommended.

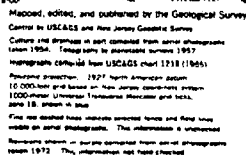
PROTECTION COMMENTS:
TNC has been involved in 4-5 projects. Some areas are under state, federal, or TNC ownership. Most landowners have been notified of significance. Much protection work remains.

MANAGEMENT NEEDS:
There is a need to develop emergency plans to deal with environmental disasters (E.G. oil spills) during shorebird migration; Control impacts

from shoreline development and human traffic. The rising shoreline must also be considered.

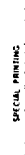
HEISLERVILLE QUADRANGLE
NEW JERSEY
7.5 MINUTE SERIES (TOPOGRAPHIC)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

[illegible]

ROAD CLASSIFICATION
 _____ Light duty
 _____ Unimproved dirt

HEISLERVILLE N. J.
 1907 5- 17 452.5/7 2
 1907
 PHOTOGRAPHED 1977
 THIS BOOK IS THE PROPERTY OF THE



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, WASHINGTON, D.C. 20002
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CAPE MAY QUADRANGLE
NEW JERSEY-CAPE MAY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
1954 CAP MAY 17 QUADRANGLE



Map made, edited, and published by the Geological Survey

Control by USCGS, USCE, and New Jersey Geologic Survey
Culture and drainage in part compiled by Corps of Engineers
Data of this series from aerial photography taken 1952
Topography by electronic means, 1954

Hydrographic information from USCGS charts 627 and 1314 (1958)

Horizontal projection: 1957 North American datum

10,000-foot grid based on New Jersey coordinate system

Red ink indicates areas in which only
contour lines and soundings are shown

1:24,000-scale Universal Transverse Mercator grid 14th,
zone 18, shown in blue

SCALE 1:24,000

CONTOUR INTERVAL: 10 FEET
DARTON IS NEAR SEA LEVEL

DEPTH CURVES AND SOUNDINGS IN FEET; DARTON IS NEAR LOW WATER

SHORELINE SHOWN BY DOTTED LINE; LAND BEHIND WATER

THIS MAP COMPLETES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U. S. GEOLOGICAL SURVEY WASHINGTON, D. C. 20506

A POLYMER REPRODUCED TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION

Highway Light duty

Medium duty Unimproved dirt

U.S. Route

State Route

CAPE MAY, N. J.

1954 CAP MAY 17 QUADRANGLE

1954

SPECIAL PRINTING
Customers and retailers should specify

MAGNOLIA LAKE SITE

QUADNAME:
SEA ISLE CITY
WOODBINE

QUADCODE:
3907426
3907427

LOCAL JURISDICTION:
DENNIS TWP.

MACROSITE:

SITE DESCRIPTION:

The site is on the outer coastal plain and occupies the headwaters of Mill Creek upstream from the Magnolia Lake dam at Route 9. Wetlands include the open waters of Magnolia Lake, atlantic white cedar swamps, and hardwood swamps. Mesic coastal plain mixed oak forest occurs in a narrow band along most of the wetland area. Dry oak-pine forest and successional pine-oak forest occurs in the remaining uplands of the site. (More field work is needed to confirm these communities.)

BOUNDARY JUSTIFICATION:

Primary bounds include the wetlands containing a globally imperilled plant, and the contiguous undisturbed uplands within the watershed needed to maintain water quality in those wetlands. Secondary bounds include developed uplands within the watershed whose proximity to wetlands on site warrants management of stormwater and groundwater quality.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

There are two separate occurrences of a federally threatened plant species. (More field work is needed to determine the quality of this population.)

CONSERVATION INTENT:

Registry, easements, or fee title acquisition.

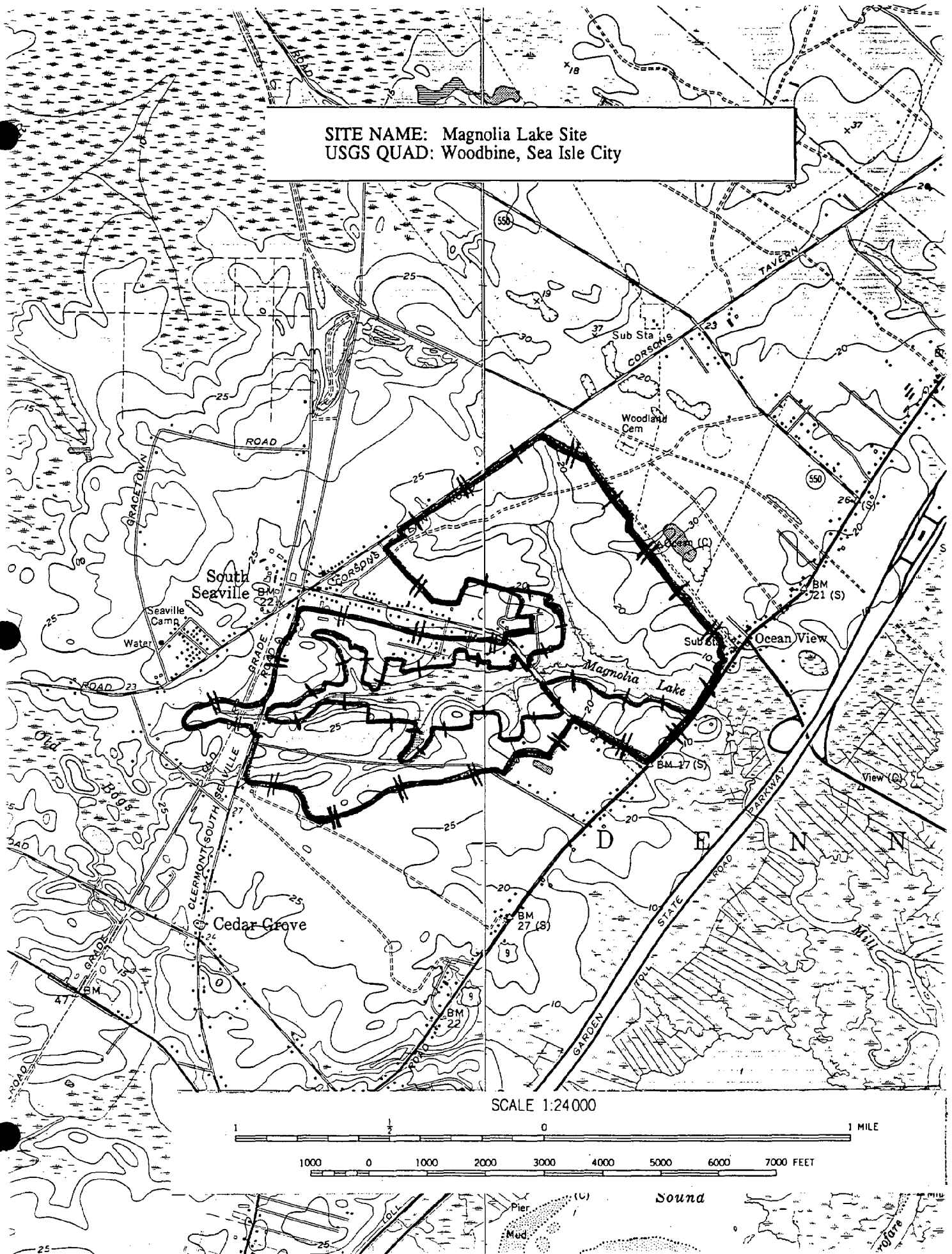
PROTECTION COMMENTS:

The site is privately owned.

MANAGEMENT NEEDS:

Unknown.

SITE NAME: Magnolia Lake Site
USGS QUAD: Woodbine, Sea Isle City



SEAVILLE METHODIST CHURCH SITE

QUADNAME:
SEA ISLE CITY

QUADCODE:
3907426

LOCAL JURISDICTION:
Upper Twp.
Dennis Twp.

MACROSITE:

SITE DESCRIPTION:
The site is on the outer coastal plain, at the headwater of a small creek draining into Ludlam Bay.

BOUNDARY JUSTIFICATION:
Primary bounds include wetlands with a federally threatened plant, and critical upland buffers. Secondary bounds include additional wetlands in the watershed with the potential to support this plant, as well as upland buffers to the watershed divide.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:
There is a small population of a federally threatened plant in the wetlands on site. More field work is needed to evaluate the quality and distribution of this occurrence.

CONSERVATION INTENT:
Unknown.

PROTECTION COMMENTS:
Unknown.

MANAGEMENT NEEDS:
Unknown.

SITE NAME: Seaville Methodist Church Site
USGS QUAD: Sea Isle City

12°30'N

MT PLEASANT (2.4 MI.)

6062 III NE (WOODBINE)

4337

4336

10'

4335

GREAT CEDAR

U P P E

(S) Seaville

ROAD

TAVERN

Tollgate

Sub Sta

CORSONS

Woodland Cem

550

BM 721 (S)

Sub Sta

Ocean View

Magnolia Lake

BM 17 (S)

Service Area

Maple Swamp

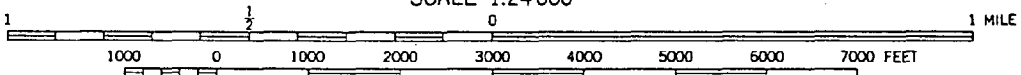
Sedge I

Lam (C)

INTRACOASTAL WATERWAY

LUDLAM

SCALE 1:24 000



SOUTH DENNIS SITE

QUADNAME:
WOODBINE

QUADCODE:
3907427

LOCAL JURISDICTION:
DENNIS TWP.

MACROSITE:

SITE DESCRIPTION:

The site is on the outer coastal plain of Cape May peninsula, with dry sandy fields along a railroad right-of-way.

BOUNDARY JUSTIFICATION:

Secondary bounds include open sandy habitat and buffer supporting a State endangered plant.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

A fair occurrence of a State endangered plant species.

CONSERVATION INTENT:

A management agreement is needed with owners and maintenance people on the mowing regime necessary to maintain endangered plant.

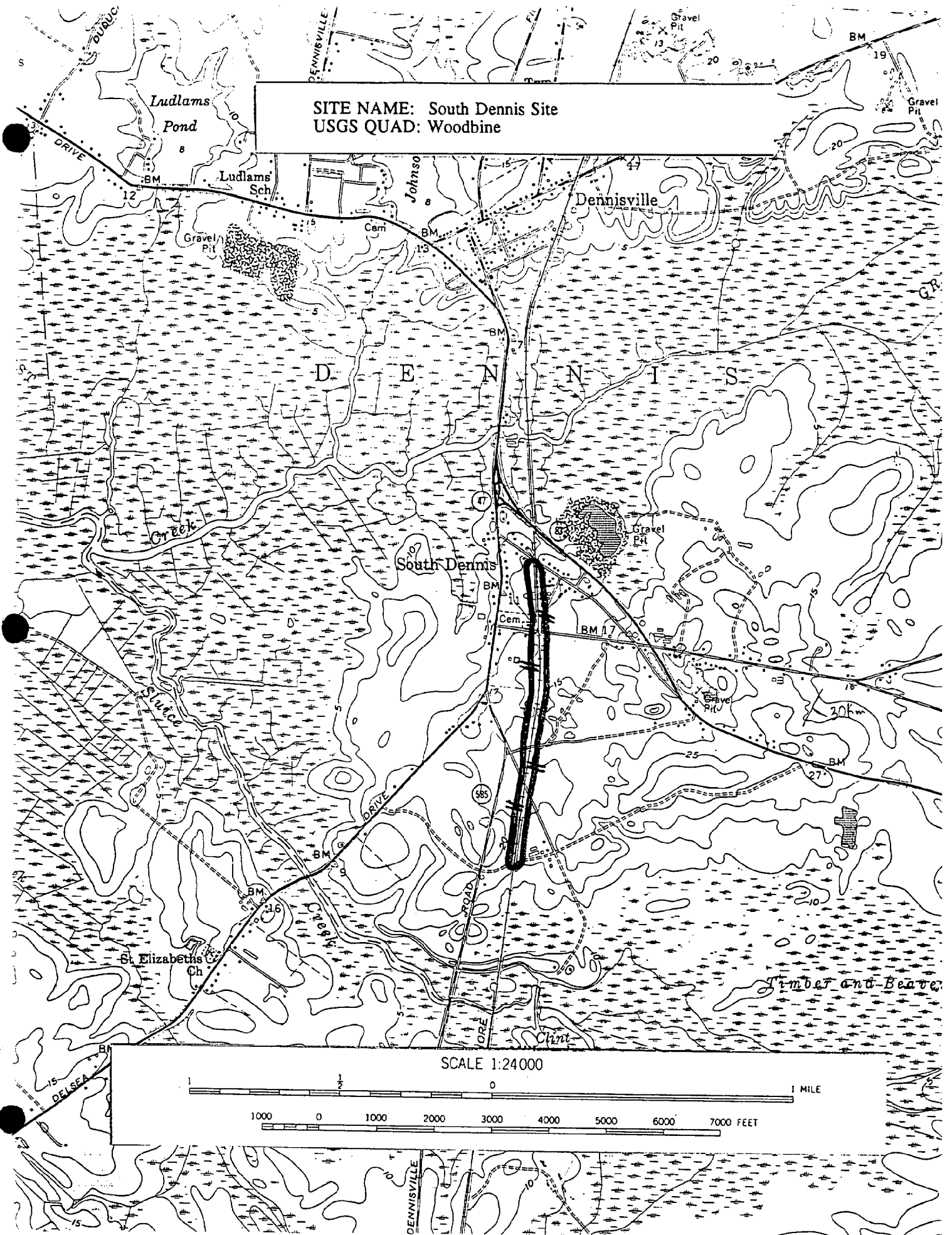
PROTECTION COMMENTS:

Land owners not contacted as of 92-04-20.

MANAGEMENT NEEDS:

Mowing is needed at proper intervals and time of year to maintain rare plant.

SITE NAME: South Dennis Site
USGS QUAD: Woodbine



TWO MILE BEACH SITE

QUADNAME:	QUADCODE:
WILDWOOD	3807487
CAPE MAY	3807488

LOCAL JURISDICTION:
LOWER TWP.
CAPE MAY CITY

MACROSITE:

SITE DESCRIPTION:

This site is on parts of two adjacent barrier islands (Cape May and Wildwood) on the Atlantic Ocean side of Cape May peninsula. Communities include marine intertidal sand beach, coastal dune grass, coastal dune shrubland, coastal dune forest, and salt marsh.

BOUNDARY JUSTIFICATION:

Primary bounds are drawn to include beach and dune habitat used by State Endangered birds, and rare coastal dune grass, coastal dune shrubland and coastal dune forest communities. Secondary bounds include adjacent salt marsh and disturbed but undeveloped portions of the US Coast Guard Station - Cape May Unit.

BIODIVERSITY SIGNIFICANCE: B2

BIODIVERSITY COMMENTS:

Contains good and excellent populations of a globally rare State Endangered bird species, and additional occurrences of State Endangered and Threatened birds. Contains fair to good (but small) examples of rare coastal dune grass, coastal dune shrubland and coastal dune forest communities.

CONSERVATION INTENT:

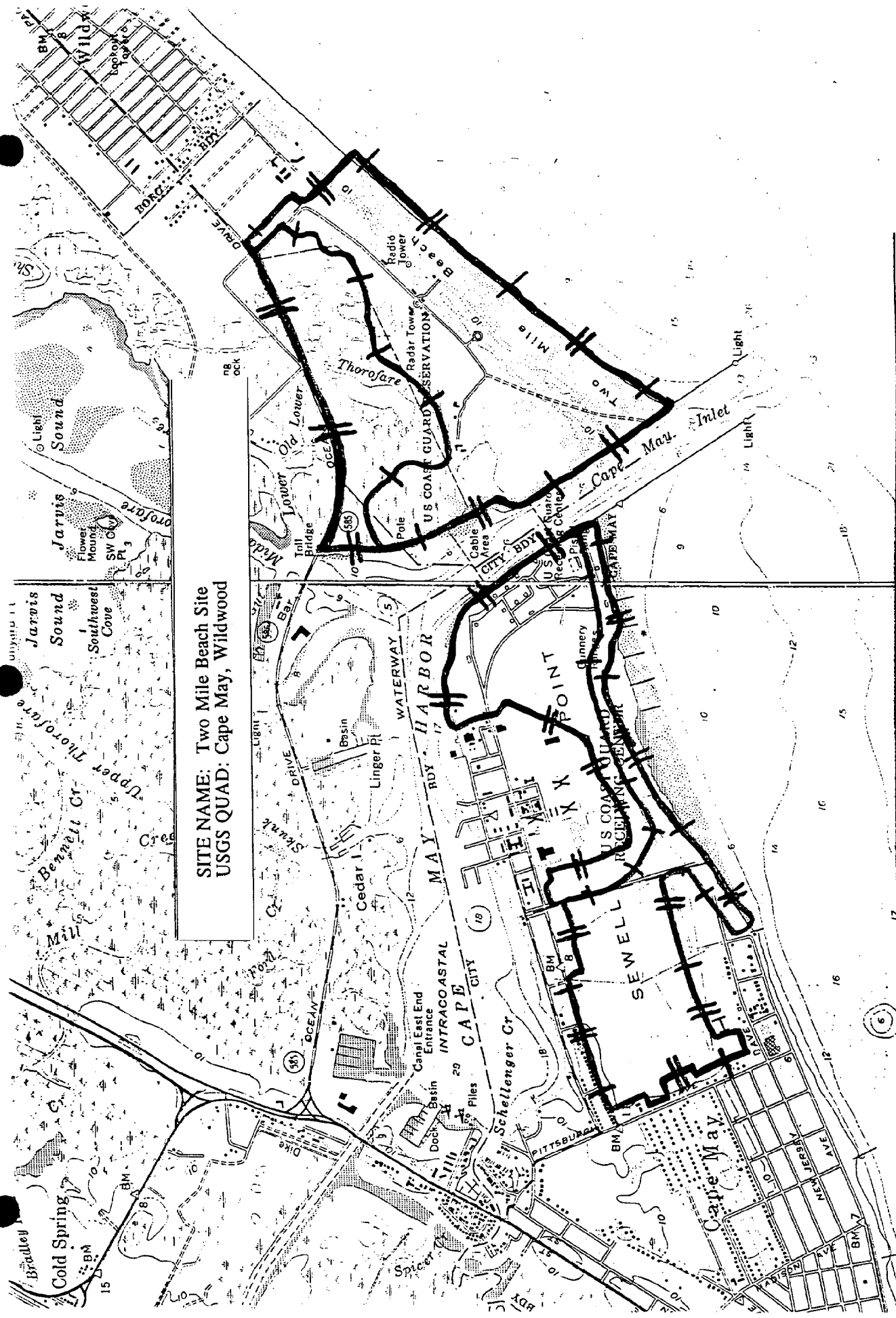
Management agreement with USCG, which is the sole property owner.

PROTECTION COMMENTS:

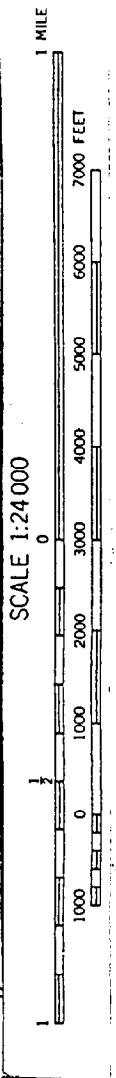
Base personnel are interested in maintaining rare species and habitat. Some resource inventory work has already been done by base.

MANAGEMENT NEEDS:

Ongoing people management.



SITE NAME: Two Mile Beach Site
USGS QUAD: Cape May, Wildwood



STONE HARBOR POINT SITE

QUADNAME:
STONE HARBOR

QUADCODE:
3907417

LOCAL JURISDICTION:
Stone Harbor Boro

MACROSITE:

SITE DESCRIPTION:

The SW tip of a barrier island (Seven Mile Beach) on the Atlantic Ocean side of Cape May peninsula. Communities include marine intertidal sand beach, coastal dune grass and coastal dune shrubland communities.

BOUNDARY JUSTIFICATION:

Primary bounds include terrestrial barrier island communities, secondary bounds include intertidal sand and mud flats.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

A concentration of state imperiled shore bird species, a fair coastal dune shrubland, and a fair to good marine intertidal sand beach.

CONSERVATION INTENT:

Acquisition of private lands.

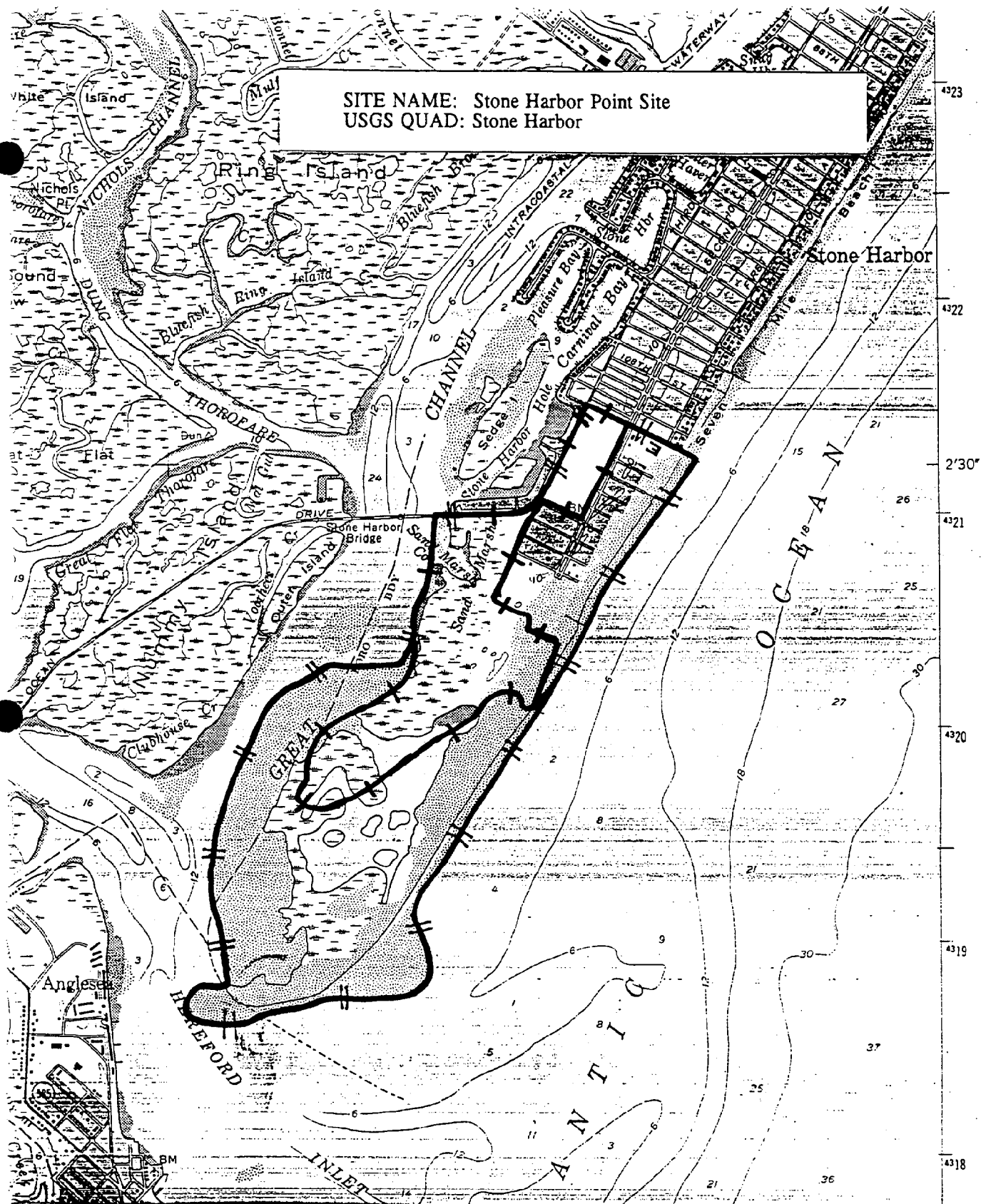
PROTECTION COMMENTS:

Stone Harbor bird sanctuary exists on N end of site and is publicly owned, otherwise ownership unknown.

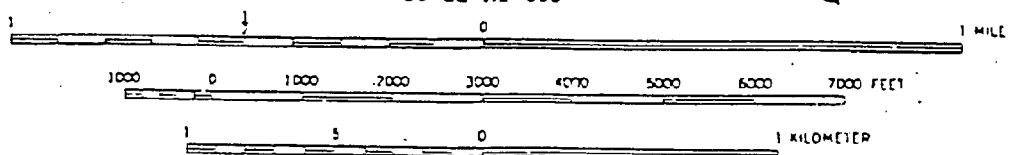
MANAGEMENT NEEDS:

People control; beach erosion.

SITE NAME: Stone Harbor Point Site
USGS QUAD: Stone Harbor



SCALE 1:24 000



1981 MAGNETIC NORTH

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

AVALON DUNES SITE

QUADNAME:
AVALON

QUADCODE:
3907416

LOCAL JURISDICTION:
Avalon Boro

MACROSITE:

SITE DESCRIPTION:

The site is a remnant patch of dune vegetation on a largely developed Atlantic Ocean barrier island. Communities include marine intertidal sand beach, coastal dune grass, coastal dune shrubland, and coastal dune forest. Five or six houses are inconspicuously located within the patch.

BOUNDARY JUSTIFICATION:

Secondary bounds include a remnant patch of barrier island vegetation and adjacent beach.

BIODIVERSITY SIGNIFICANCE: B3

BIODIVERSITY COMMENTS:

There is a good population of a globally rare State endangered bird and a concentration of additional State endangered and threatened shore birds. There are good, but small patches of rare coastal dune grass and coastal dune shrubland communities, and there is a very small patch of coastal dune forest.

CONSERVATION INTENT:

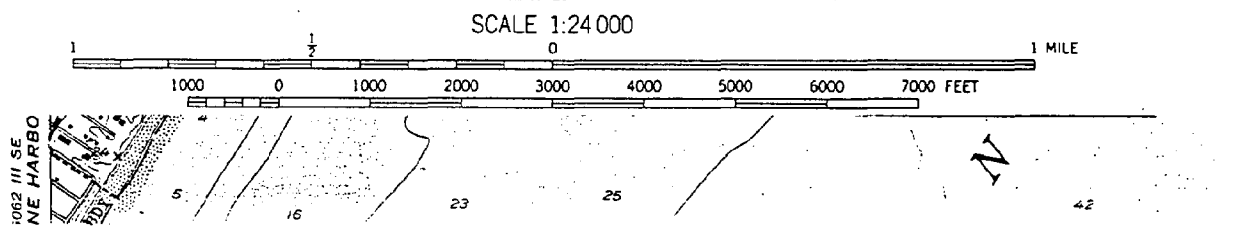
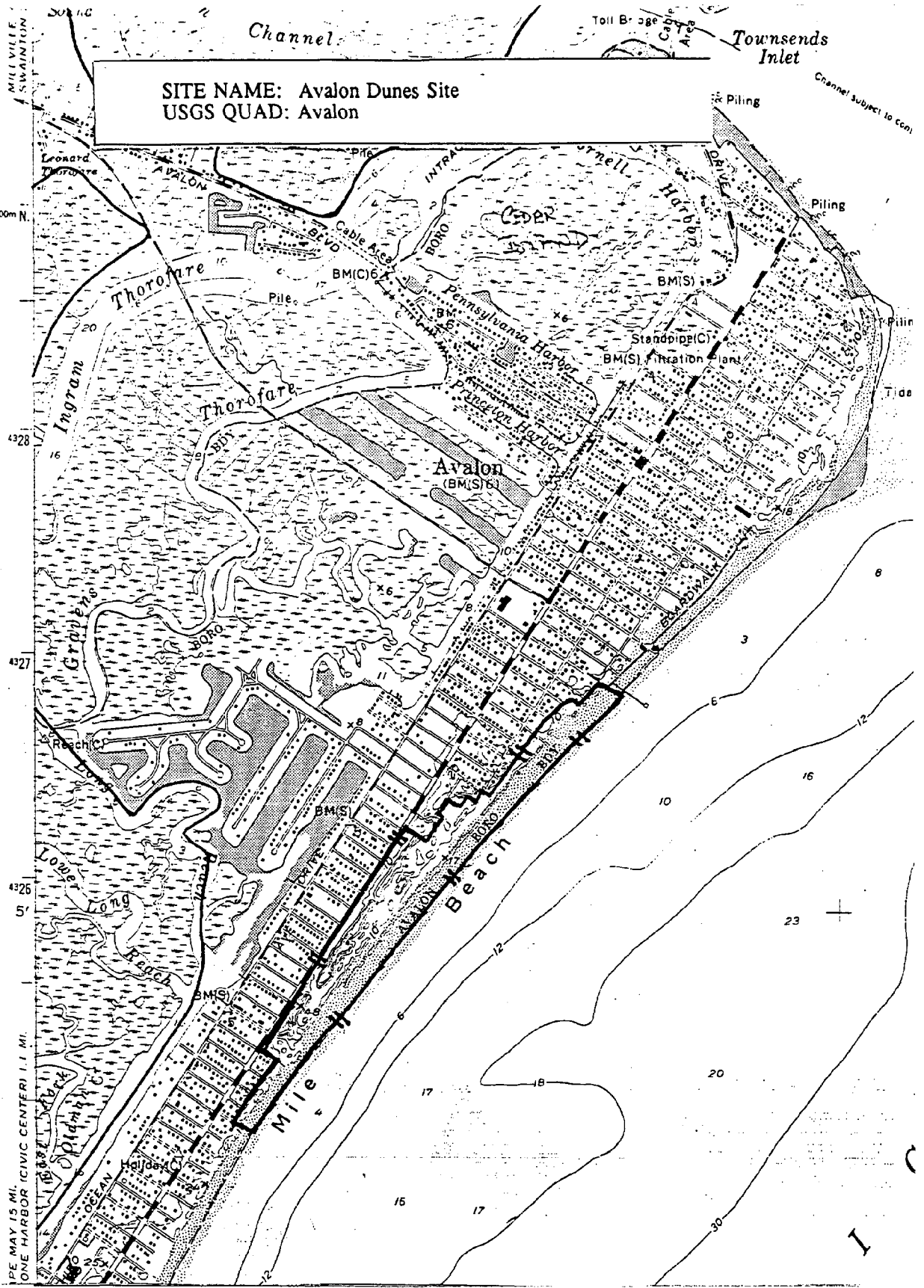
Management agreement for town owned preserve to maintain dune and beach communities and protect nesting birds. Registry, followed by conservation easements for the half dozen homes within the site.

PROTECTION COMMENTS:

Most of the site is protected as a town preserve.

MANAGEMENT NEEDS:

There is a need to prevent human disturbance of dunes and nesting birds. Raking of the upper beach should be stopped to allow plant and animal communities typical of this habitat to become established.



CORSON INLET NORTH SITE

QUADNAME:
SEA ISLE CITY

QUADCODE:
3907426

LOCAL JURISDICTION:
Ocean City

MACROSITE:

SITE DESCRIPTION:

The site is on the undeveloped south end of an Atlantic Ocean barrier island (Ocean City). Communities include coastal dune shrubland, coastal dune grass and marine intertidal sand beach.

BOUNDARY JUSTIFICATION:

Secondary bounds include beach and dune habitat of rare birds.

BIODIVERSITY SIGNIFICANCE: B2

BIODIVERSITY COMMENTS:

Contains an excellent population of a globally rare State Endangered bird, and good populations of two other State significant animals. There is a good example of a coastal dune shrubland (bayberry variant).

CONSERVATION INTENT:

Management agreement with Division of Parks and Forestry to maintain rare birds and communities.

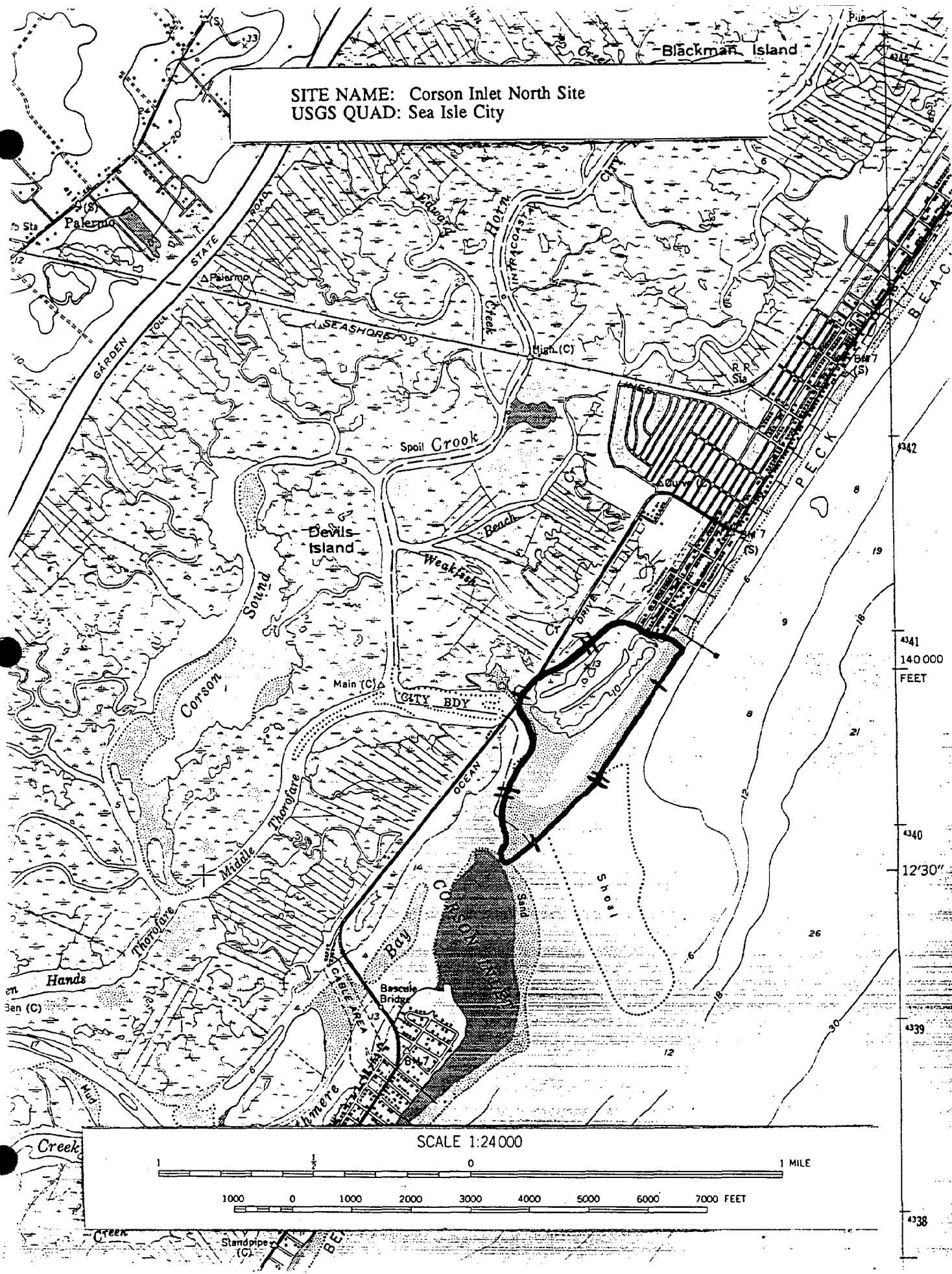
PROTECTION COMMENTS:

The site is state owned, as part of Corson Inlet State Park.

MANAGEMENT NEEDS:

Ongoing people control is needed, especially in back dunes. Upper beach raking should be stopped to allow animal and plant communities typical of this habitat to develop.

SITE NAME: Corson Inlet North Site
USGS QUAD: Sea Isle City



LILY LAKE SITE

QUADNAME:
CAPE MAY

QUADCODE:
3807488

LOCAL JURISDICTION:
CAPE MAY POINT BORO

MACROSITE:

SITE DESCRIPTION:

On the outer coastal plain, at the southern tip of Cape May peninsula.
Residential development in the city of Cape May Point completely surrounds
the lake.

BOUNDARY JUSTIFICATION:

Boundaries defined by the lakeshore and include habitat for rare plant
species.

BIODIVERSITY SIGNIFICANCE: B4

BIODIVERSITY COMMENTS:

The lake has one historical and two extant state imperiled plant species.

CONSERVATION INTENT:

Registry or protection agreement.

PROTECTION COMMENTS:

Ownership unknown.

MANAGEMENT NEEDS:

Unknown.

SITE NAME: Lily Lake Site
USGS QUAD: Cape May



SCALE 1:24 000

